

CHILTON'S

MOTOR AGE

JULY 1957



Jobber Executive Edition —follows page 32

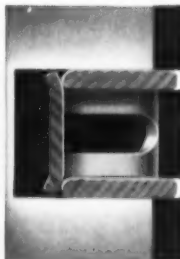


This new piston
ring is setting the
AUTOMOTIVE
WORLD
on its ear!

Sealed Power's Stainless Steel Oil Ring

Does things no other ring can do

SHOP MEN SHOULD KNOW THESE FACTS...



♦ Proper axial pressure of the ring side rails against the sides of grooves assures side-sealing—even under difficult high vacuum conditions of deceleration.

♦ Circumferential abutment type design makes the ring independent of contour and depth of piston groove. The SS-50U exerts pressure uniformly... conforms more readily to the cylinder bore.



Holds full tension at engine operating temperature • resists corrosion • won't sludge • actually hardens in use • chrome-plated steel rails for more than double normal life • seats instantly.



SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING!

BEST FOR RE-BORE!



*The
hard working
seal is
made with*

Permatex Sealants

*Put the
FORM-A-GASKETS
to work for you*

STICK-N-SEAL

outstanding tackiness —
won't wash out —
resists gasoline, lubricating
oils, water, glycol and kerosene.
A quick-setting brushable liquid
cement made of Buna-N type synthetic
rubber. Holds gaskets and other material
to be assembled in place and does away with
"delayed reaction" leaks after the job is done.

GASKET CEMENT

for permanent assemblies where no
adjustments or disassemblies are necessary.
An extra-heavy adhesive that dries hard—resists
gasoline and oil.



No. 1—quick drying, hard
setting paste for sealing
irregular surfaces and permanent
assemblies that must withstand
high pressure and heat.



No. 2—slow drying, pliable
paste for general assembly
work where disassembly
is periodically necessary.

No. 3—a brushable liquid that
remains pliable for easy
disassembly. Ideal for reaching
hard-to-get-at areas like
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and water pumps.



Super "300"—stands up under
new synthetic and detergent
lubricants. A brushable liquid
for use in high compression
engines and transmissions.



**You'll make Higher Profits for Higher Quality Work
with the Complete Permatex Line of Automotive Sealants**
Order from your jobber today!—



Permatex Company, Inc.

General Offices: 300 Broadway, Huntington Station, New York
Factories: Brooklyn 35, N. Y., Kansas City 15, Kansas

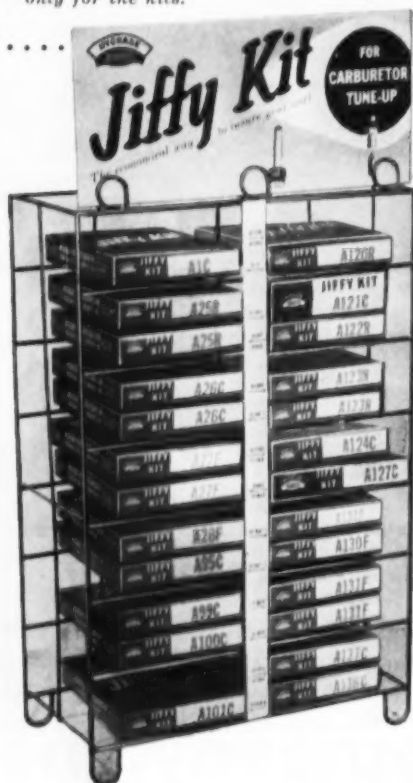


MONEY-MAKING CARBURETOR TUNE-UPS IN A JIFFY

Save time, prevent mistakes, make more money on every job, with HYGRADE's convenient JIFFY KITS.

..... JIFFY-RAKS ARE FREE

Ask your jobber about JIFFY KITS in balanced JIFFY-RAK Merchandising assortments. It's the handy way to keep your kits. You pay only for the kits.



Want details in a jiffy? Call your jobber today, or write HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., Long Island City 1, N. Y.



JUST THE PARTS YOU NEED IN A JIFFY! Gaskets, pump pistons, needles and seats, extra parts where necessary, complete instructions for each kit, and even the gauges you need for the job! All in one compact package. It's economical. (You only pay for the parts you always use.) You'll want JIFFY KITS for every make and model car.

HYGRADE *Jiffy Kit* carburetor tune-ups in a jiffy!

CHILTON'S

MOTOR AGE

WITH WHICH IS COMBINED AUTOMOBILE TRADE JOURNAL

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JULY 1957

Vol. 76, No. 8

IN THIS ISSUE

NEWS

Report to Our Readers.....	31
Newscoop	33
News of Automotive Education.....	92

ARTICLES

A New Approach to Automotive Accounting.....	37
Paint More Light on the Subject.....	39
Selling Shop Safety.....	40
On the Brink of Success.....	42
Servicing GM's Non-Slip Differential.....	44
Draining and Refilling Automatics.....	46
New Scotsman Bows	48
Celebrates Golden Anniversary.....	49
Quality Never Hurts Volume.....	50
Motor Age Shop Clinic Quiz.....	52

DEPARTMENTS

Service Man's Idea Book.....	53
Management Clinic	54
Body Shop Tips.....	55
Readers' Clearing House.....	58
Tune-Up Specifications	60
New Car Registrations.....	62
New Products	64
Price, Weight and Body Table.....	71
Shop Kinks	72
Calendar of Coming Events.....	122
Advertisers' Index	128
Last Laugh	130



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ANOTHER TRUCKLOAD OF MOOG UNDER-THE-CAR PARTS! This one is bound for National Parts Warehouse in Atlanta, just three days after receipt of order by Moog.

Your Moog Jobber is ready now to help you **BREAK ALL RECORDS IN UNDER-THE-CAR BUSINESS!**

The big selling season in under-the-car parts is under way. And thanks to Moog's new Warehouse Distributors and Truckload Selling Policy, your Moog Jobber is better prepared than ever to serve you promptly!

See him for the industry's *most complete* line of chassis and suspension parts, backed by a powerhouse line-up of new Moog displays and selling aids.

Don't miss under-the-car business because you failed to order enough fast-selling Moog parts and take advantage of the Moog merchandising materials available to you. Your Moog Jobber is awaiting your call!



ON THE SHELVES, READY FOR GARAGEMEN! Looking over part of the shipment are (front to rear) T. V. Masingill and B. M. Smith of National Parts, and Bob Martin and Henry Hunt of Moog.

FLASH! The *hottest* item in the under-the-car field right now is the MOOG PH OVERLOAD Helper Spring* for passenger cars and station wagons, advertised in *Popular Mechanics*. If you are not yet cashing in on this sensation, we advise you to investigate at once! See your Moog Jobber or write . . .

*Patent Pending

**Moog Industries, Inc.
St. Louis 14, Mo.**



"...we'd 'have to be shown' a better finance connection"

says **ERNEST ST. CLAIR, JR.**, DeSoto-Plymouth
Dealer of Amarillo, Texas

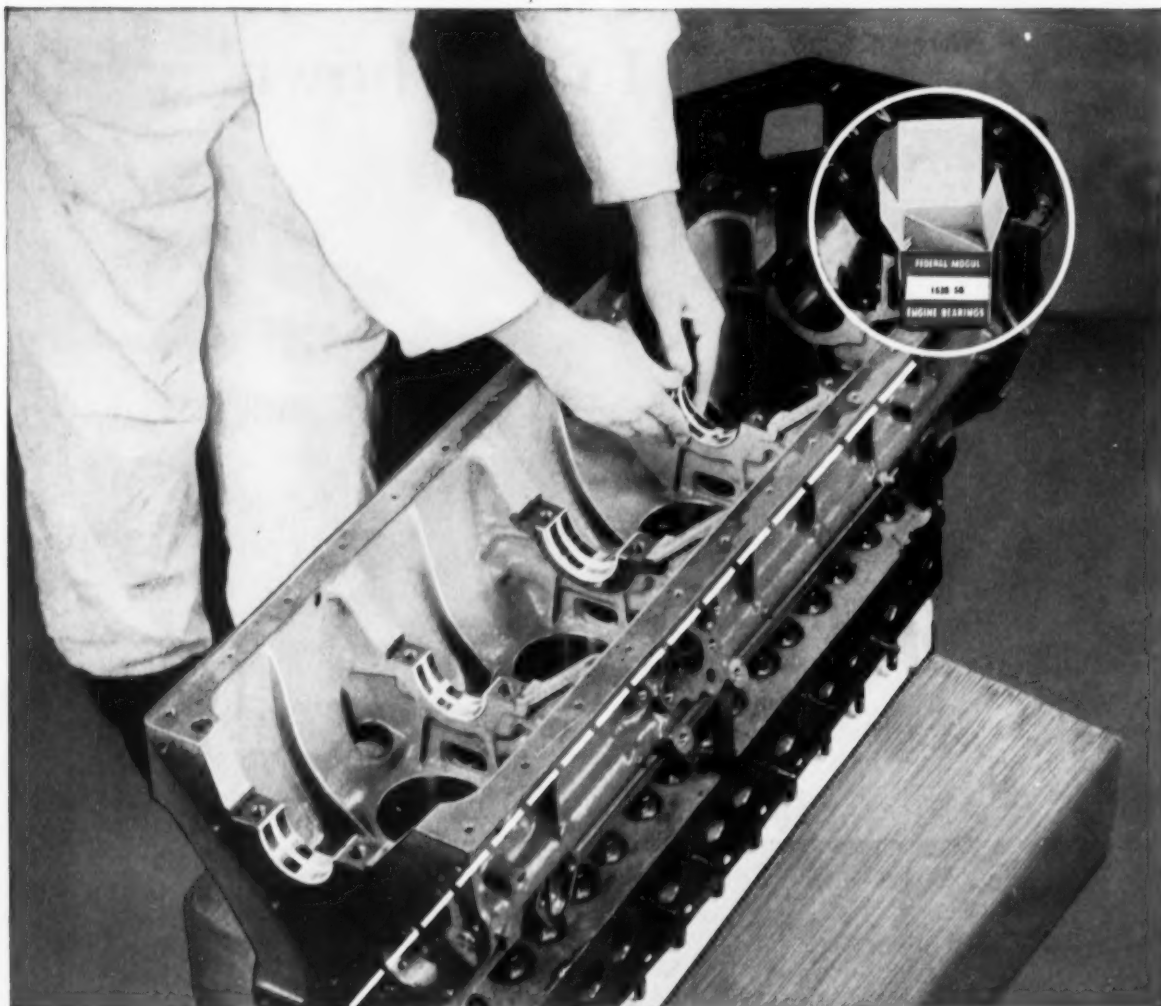
"We're not from Missouri, but we'd 'have to be shown' a better finance connection than COMMERCIAL CREDIT. We've had experience with several companies and COMMERCIAL CREDIT is the best we've dealt with. We like their national reputation and their valuable sales assistance at the local level. For instance, the local office keeps us posted on pay outs or near pay outs. Just that one factor leads to additional volume each year."

Commercial Credit dealers are successful dealers

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A service offered through subsidiaries of the Commercial Credit Company, Baltimore . . . Capital and Surplus over \$200,000,000 . . . offices in principal cities of the United States and Canada.



Why do most mechanics prefer the replacement bearings in the black and red box?

Your own experience will tell you why. They know they'll get exactly the right standard or undersize bearing for any reconditioning job . . . because only the Federal-Mogul line of service bearings is truly complete! They know the quality is right . . . they've been proving it on millions of overhauls for 33 years! They know their jobber is backed by fast service from our nation-wide network of warehouse stocks. No wonder that the black and red box is your best bet for every replacement bearing requirement!

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DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC.



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will continue to
serve the needs
of all industries**

Founded in 1907, PROTO is today the World's largest producer of high-quality hand service tools. Leadership is attributable mainly to the *professional* quality of PROTO tools—resulting from intensive research, field-tested designs, special alloy steels, and superior manufacturing.

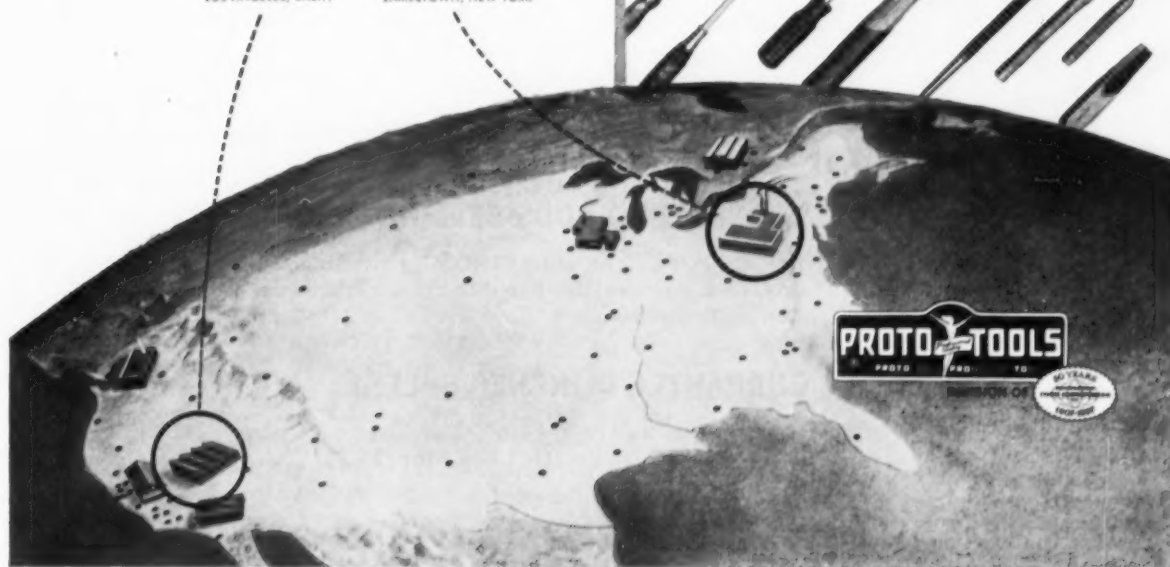
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PROfessional
Tools!**



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Skid-stopping "Ounce of Prevention" Safety Discs give you an **EXCLUSIVE** sales feature that customers can see!



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FIND 'EM, FIX 'EM and FORGET 'EM... And you Find 'em and Fix 'em **FAST** with the **DU MONT EnginScope**. It takes only a few seconds to slip on the two SignalClips to hook up the EnginScope — with **NO** dismantling or disconnecting. The EnginScope gives a **complete** analysis in a few seconds. The exclusive SuperScan display presents the complete ignition system in full detail, showing up both the immediate trouble and its basic cause.

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*Trade Mark



Only
\$725

ENGINScope SALES

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DEPT. MA-7 CLIFTON, N. J.

- ☐ Arrange a **NO OBLIGATION** demonstration of the EnginScope
☐ Send more detailed information on the EnginScope

NAME

ADDRESS

CITY

ZONE STATE

**You'll Get Them
COMING and GOING
with *wix*!**



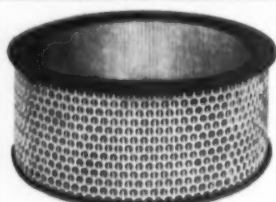
More and more car owners are rolling into service establishments all over the country, asking for WIX Oil Filter Cartridges. WIX tells your customers, in LIFE and the SATURDAY EVENING POST, about the damage that dirt and grit in motor oil can do to a car engine. And, "when motor oil becomes a dirty word" — WIX is THE Oil Filter to use! WIX not alone brings 'em in, but also gives you the most advanced selling aids in the business . . . the time-saving, profit-producing sales tools that MAKE your location a profitable Filter Service Center. If you don't have the WIX-O-MATIC Sales and Service Plan operating for you right now, you're losing sales! For, you can have it FREE to speed your service and step up your profits — PLUS GUARANTEED SALES! Get the WIX-O-MATIC story from your Jobber or write us direct right now.

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OIL FILTERS • AIR FILTERS
AUTOMOTIVE • INDUSTRIAL • RAILROAD
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In Canada: Wix Accessories Corp. Ltd., Toronto



WIX-O-MATIC

The money-making Filter Service Plan that's revolutionizing Oil Filter Cartridge sales! Makes your service quick and profitable — the right Cartridge, always at your fingertips. Minimum, controlled inventory. GUARANTEED SALE! And, you can have WIX-O-MATIC — FREE. Ask for details.



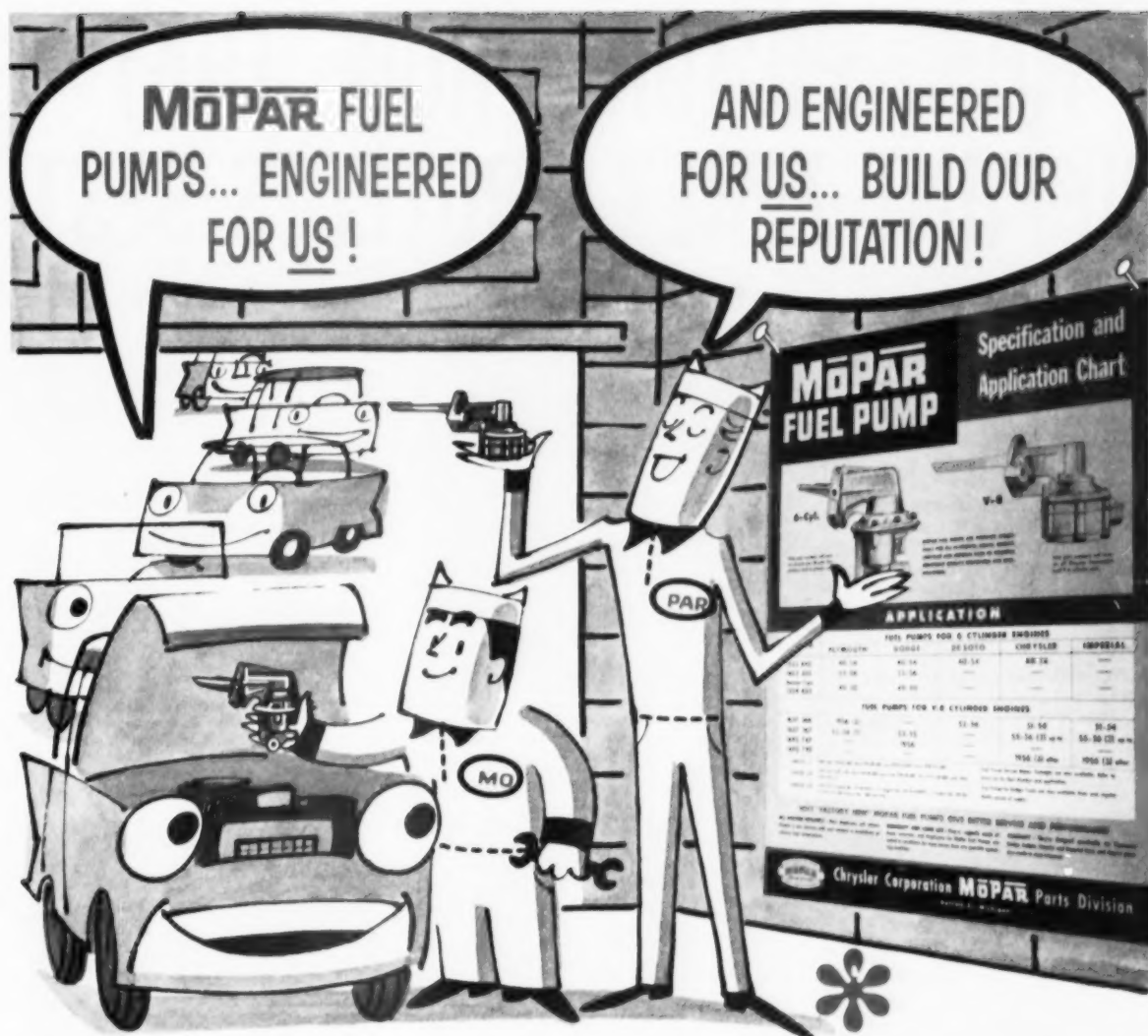
High porosity POLYMITE pleated filtrant retains microscopic particles . . . lets the air through! Imbedded in plastisol seals with corrosion resistant metal shields.

***wix*®** **DRY TYPE** **POLYMITE AIR FILTER**

Another BIG Profit-Maker from WIX—for YOU! WIX Air Filters trap more dirt and dust, last longer . . . yet maintain high air flow rates. Tests show less pressure drop when new, and even after thousands of miles of service . . . always a positive seal against by-passing. An outstanding example of WIX Engineered Filtration. Get the facts and prices from your WIX Jobber, TODAY!

Now— **"SPIN-ON" TYPE** **OIL FILTER FOR** **OLDSMOBILE** **BUICK and PONTIAC**

A simple WIX Kit (K-40) converts the hard-to-get-at Full-Flow Filters on these cars to use the new WIX "Spin-On" Filter that is original equipment on 1957 Ford Family cars.



SMART BOYS! They use MoPar Fuel Pumps because they're—

- 1 **Precision-fitting.** Engineered for Plymouth, Dodge, De Soto, Chrysler and Imperial cars specifically... made to closest tolerances.
- 2 **Durable, long-lived.** Ruggedly made of finest materials; diaphragms tested against 6 years' driving conditions, more severe than actual conditions.
- 3 **Efficient in all weather.** Diaphragms remain flexible in sub-zero cold, and resistant to breakdown at

extreme high temperatures. Pumps have 100% reserve capacity to meet demands at all speeds for today's engines.

Order MoPar Fuel Pumps or other precision engineered parts and accessories from your MoPar wholesaler or Plymouth, Dodge, De Soto, Chrysler or Imperial dealer.



FREE — MoPar Fuel Pump specification and application chart (17 x 22 inches). It tells you the fuel pump needs of Chrysler Corporation cars at a glance. Call your MoPar wholesaler or send the coupon below:



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DETROIT 31, MICHIGAN

Advertising Department, MoPar Division

CHRYSLER MOTORS CORPORATION

P.O. Box 1718, Detroit 31, Michigan

Yes! Send me a convenient Fuel Pump wall chart:

Name _____

Address _____

City _____ State _____

NOW! PICTURE-PROOF THAT DU PONT ZEREX® PROTECTS BEST

DU PONT'S CHEMICAL RUST INHIBITOR MAKES THE BIG DIFFERENCE IN ANTI-FREEZE

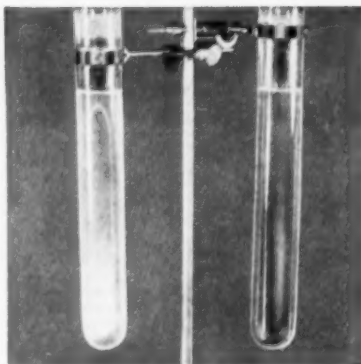
ANTI-FREEZE PROTECTION ALONE IS NOT ENOUGH. Cooling system acids, rust, corrosion and radiator hose rot can cause overheating, too, with possible damage as disastrous as from freezing.

"Zerex" contains a special chemical rust inhibitor, developed by Du Pont, that gives unequalled protection against acid, rust and corrosion . . . and will not rot rubber hose. It's the big difference in anti-freezes. Where other permanent-type brands may give only partial protection, "Zerex" gives complete protection to all vital parts of the cooling system.

So why sell partial protection when you can offer the FULL protection of "Zerex"—the permanent-type anti-freeze made and backed by Du Pont!

SELL THE IMPORTANCE OF PROPER INSTALLATION!

Anti freeze must be properly installed to give maximum protection. Don't let your customers take your service for granted. Every time you sell "Zerex", take a moment to explain why anti-freeze must be properly installed—by an expert.



"ZEREX" WORKS IN ALL WATERS. Du Pont "Zerex," with its exclusive chemical rust inhibitor, is compatible with all types of water. Even in hard water the inhibitor stays in perfect solution (flask on right above). Hard water makes the inhibitors used in many anti-freezes precipitate out (flask on left), materially reducing the protective qualities.



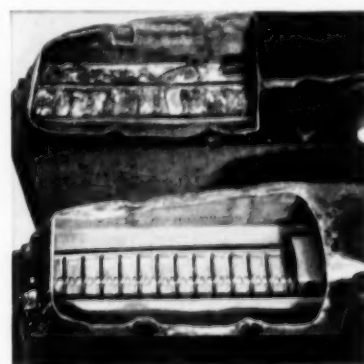
"ZEREX" WILL NOT ROT RUBBER HOSE. "Zerex" will not rot or soften rubber radiator hose (hose on right above) because it contains no oil. Oil is harmful to rubber hose, softening or rotting it, sometimes in one season (hose on left). The weakened hose may collapse or burst, causing dangerous overheating and possible serious engine damage.



"ZEREX" PROTECTS ALL METALS. As many as seven different metals are used in modern cooling systems—iron, copper, solder, aluminum, zinc, brass, stainless steel. Metal samples on left above show how anti-freeze can corrode them. Because of Du Pont's exclusive chemical rust inhibitor, "Zerex" completely protects all 7 metals against acid, rust and corrosion, as samples on right show.



"ZEREX" NEUTRALIZES ALL ACIDS. During the normal operation of the cooling system, permanent-type anti-freezes tend to form corrosive acids that accelerate the formation of harmful rust and corrosion. However, "Zerex" with its exclusive rust inhibitor has extra "reserve alkalinity" that neutralizes all the acids that may form throughout the normal service life of the anti-freeze solution.



"ZEREX" KEEPS RUST IN SUSPENSION. Upwards of a half pound of rust can form in a normal cooling system in one year. But "Zerex", because it contains no oil, keeps the rust in suspension so it can be safely drained out. It does not cause it to stick to the metal surfaces to clog radiator or engine block. "Zerex" with its exclusive chemical inhibitor keeps cooling system clean and free-flowing.

ZEREX®
is the premium
PERMANENT-TYPE
anti-freeze
made and backed
by Du Pont



ZEREX
Anti-freeze
with rust inhibitor

ZERONE®
is Du Pont's
ECONOMY-TYPE
anti-freeze—
tests prove
no boil-away



ZERONE
Anti-freeze

WITH DU PONT'S EXCLUSIVE CHEMICAL RUST INHIBITOR

BE READY WITH DU PONT "ZEREX" AND "ZERONE"
—THE ANTI-FREEZE BRANDS MOTORISTS
KNOW AND TRUST



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

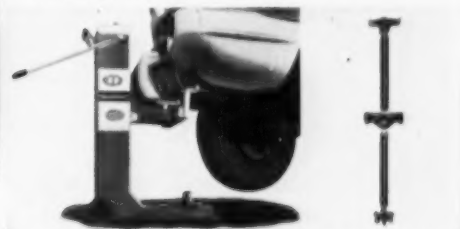
Only from **BLACKHAWK...** **ALL** the jacks



BLACKHAWK PORTO-POWER HYDRAULIC BODY JACK EQUIPMENT cuts reconditioning costs . . . lets you make better bids. Only Porto-Power offers more speed, more ways to push and pull, easier setups!



SERVICE JACKS — 1½, 2, 4 and 10-ton for getting under and lifting fast, safe and sure!



HYDRAULIC ONE-END LIFT — '57 model Service Chief (1½-ton) handles all '57 cars by bumper bracket or pad. New "Hi-Lift Kit" converts them to high lift jacks.

for **ALL** the jobs!

BEAT THE "FIXED-COSTS" SQUEEZE WITH THE RIGHT JACK FOR EVERY JOB! Worn-out, time-consuming make-do jacking equipment, plus fixed rates and overhead, rips gaping holes in service profits!

Blackhawk offers you a real solution! Speed-up service, step-up volume and profits with the **RIGHT** Blackhawk jack for every job. Choose efficient, cost-cutting mechanicals or

time-saving hydraulics from the world's *most complete line!* Choose years-ahead, exclusive designs for new car styles, wheels, bumpers.

Handle all body repair work more profitably too! Only Blackhawk Porto-Power hydraulic body jacks give you **ALL** the pumps, **ALL** the rams, **ALL** the attachments for "full-profit" repair of 20 major body sections of **ALL** cars! Don't Delay! See your Blackhawk jobber today!

ORDER FROM YOUR BLACKHAWK JOBBER NOW!



MECHANICAL ONE-END LIFT — Jeep Jack features revolutionary air frame design. Weighs just 44 lbs., 1½-ton capacity.



HAND JACKS — Meet today's bigger loads, greater lifting spans, broader application. Capacities from 1½ to 100-tons.



TRANSMISSION JACKS — Hydraulic T-lifts are the most modern built for transmission service. 2, 5 and 7-ton horses fit all cars, trucks.

make your next jack buy a

BLACKHAWK

BLACKHAWK MFG. CO., Dept. J-677, Milwaukee 46, Wisconsin



If you want to make top vacation sales to the Ford owners we're steering to the **FoMoCo** sign, better get yours now. See your Ford Dealer and get your sign . . . plus eye-catching point-of-sale display material.

And make sure you have plenty of Genuine Ford Parts to handle the business

Mr. Independent!

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We're the folks in the eye-catching, summer-long
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This month more than 30 million people will see us in full-page, four-color
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Ford owners are pre-sold on keeping their Fords all Ford with
Genuine Ford Parts . . . this extra push will be
a real sales clincher for you.

See your
Ford Dealer
or Mail
this coupon



PARTS AND SERVICE SALES PROMOTION DEPT.

Ford Division, Ford Motor Company, Box 658, Dearborn, Mich.

Please send me complete information telling me how independent garages and service stations can get a Genuine Ford Parts sign. I'd like to cash in on this, too!

FIRM NAME _____

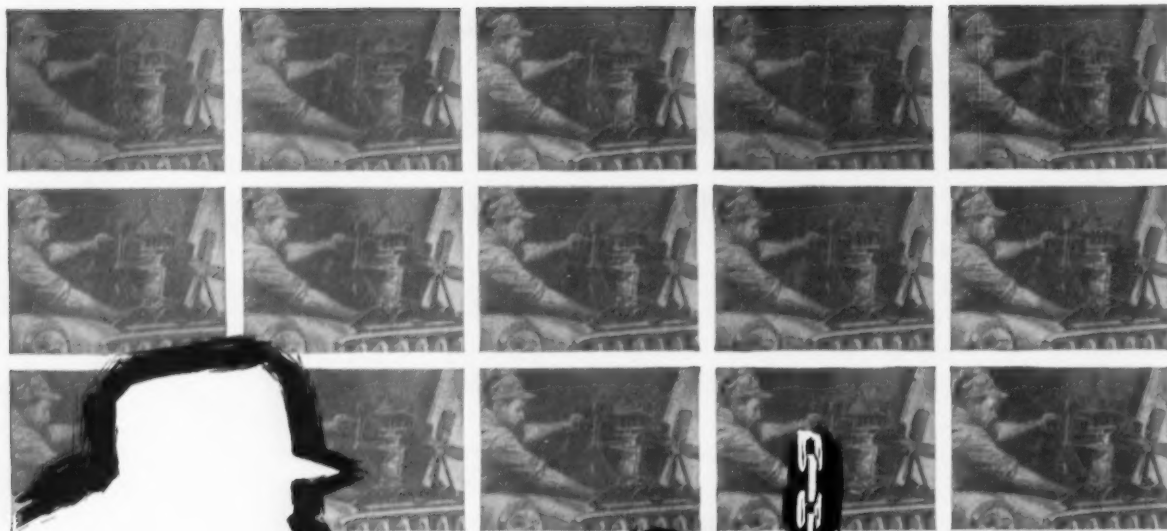
INDIVIDUAL'S NAME _____

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CITY _____

STATE _____

H-7



For Engine Overhauls...

standardize on **CLEVITE 77*** bearings

extra stamina for high-duty service



*Your NAPA Jobber
is a Good Man to Know!*

Monmouth

ENGINE BEARINGS

CLEVITE SERVICE

The Cleveland Graphite Bronze Co.
Division of Clevite Corporation
Cleveland 3, Ohio



*The words Monmouth, Clevite and Micro are registered trade marks of Clevite Corporation

MARK



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PITTSBURGH SAFETY GLASS is no more than one day away from your auto glass replacement shop or dealership. All it takes is a phone call to your nearest Pittsburgh Branch or Distributor to get glass in a hurry.

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4. Less Glass Handling

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NEW OIL SEALS

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with National's Big Red Cabinets!

National Oil Seal Service Stocks

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World's best interchange data

*Join the 45,000 profit-minded shops now stocking
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maintain your stock. Call him today!*

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Division of Federal-Mogul-Bower Bearings, Inc.
Detroit 13, Michigan



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WILL SAVE
YOUR CAR



If you want an Impact Wrench
designed and built the way it should be
in the first place and a factory that you
know goes a little bit further than most
in standing behind its tools...

BUY A... 



IMPACT
WRENCH



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& CO., INC.**

SIoux CITY, IOWA, U.S.A.

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- SCREW DRIVERS
- SANDERS
- GRINDERS
- IMPACT WRENCHES
- POLISHERS
- PORTABLE SAWS
- FLEXIBLE SHAFTS
- ABRASIVE DISCS
- VALVE FACE GRINDING MACHINES

"And while you're here let's
look at the brakes"



Get them to let you **P-L-S**

Pull a wheel **L**ook at the brakes **S**how them what's needed

It's a tried and proven way to find
profitable brake repair jobs

Most car owners will welcome a P-L-S brake inspection. Figures show that six times out of seven they'll let you pull a wheel. When you can *show* them what's needed, it's easy to get the job. And they'll appreciate your interest in their safety.

If a reline is needed, give your customers Grey-Rock Balanced Braksets for driving safety and long wear—the linings with the difference you can *see, show and sell!*

See the new Grey-Rock Brake Service movie. Experts say it's the best film on brake service ever made.

Ask your Grey-Rock jobber about the new P-L-S Plan. He has facts and figures to prove it can make more money for you.

Only **Grey-Rock** makes

BALANCED BRAKSET LININGS
BALANCED BRAKSETS • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS
GREY-ROCK DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.



SEE the difference. Distinctive Grey-Rock brake linings look different—are different. You can see it in the many different types of linings Grey-Rock combines in sets engineered to give balanced brake action and longer lining life.



SHOW the difference in distinctive Grey-Rock woven and molded combinations. Where used, they provide far better brake action than molded linings alone. In other Grey-Rock sets, all-molded types give best results.



SELL the difference. When you can *see* and *show* the difference, you can *sell* the difference. Explain how different shoes, even in the same brake, do different work, and why different types of lining are necessary for balanced brake action and long wear.

Consistently advertised
in

The Saturday Evening

POST



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Sintered Metal Products • Engineered Plastics • Rubber Covered Equipment • Abrasive and Diamond Wheels • Laundry Pads and Covers • Bowling Balls
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"Whatever you need to make money in the battery business, Auto-Lite has it! A price leader? Auto-Lite gives you its complete low-priced line that has price and quality, too. Volume sales? Auto-Lite has a complete middle-priced line. A high-profit premium line? You can't beat Sta-ful. And with all this you get smart point-of-purchase material, national advertising, reasonable guarantees and a big original equipment market. That's why we've sold Auto-Lite Batteries for 15 years and that's why they've paid off for us and our dealers."

Lawrence M. Lee

President

NORTHERN AUTO SUPPLY CO.
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"AUTO-LITE ACCEPTANCE IS YOUR PROFIT GUARANTEE"



ALL TOP-QUALITY...



You can depend upon WAGNER QUALITY because
Wagner Products are used as original equipment by
manufacturers of cars, trucks, buses and trailers.

Wagner Lockheed

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You save time...and your reputation
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Wagner Lockheed BRAKE SERVICE PRODUCTS



You get uniform high quality—and save time—when you standardize on Wagner Lockheed.

There's a reputable supplier near you—wherever you are—prepared to furnish Wagner Lockheed Brake Parts and Fluid for every hydraulic brake system—and brake lining for every car, bus, truck or trailer.

WAGNER LOCKHEED BRAKE FLUID is compounded of finest ingredients—chemically balanced to function efficiently under all driving conditions. It surpasses S.A.E. specifications. Just two types answer every service need.

WAGNER LOCKHEED REPLACEMENT BRAKE PARTS are manufactured by the same machinery—to the same specifications—as Wagner parts used for original equipment. Cover every make and model of vehicle including hard-to-find numbers not easily obtainable elsewhere. Parts are available individually or in factory-sealed kits.

WAGNER LOCKHEED BRAKE LINING assures more miles of quick, safe, smooth stops...fewer brake adjustments...less drum wear. Uniform in density, composition, and frictional quality. Available in sets, blocks, rolls, slabs, cut segments and on shoes.

WAGNER EXCHANGE BRAKE SHOE SETS have lining "bonded-on" or "riveted-on" according to highest factory standards. Sets are available for all popular passenger cars and some light trucks with both standard and over-size lining thicknesses.

USE COUPON to get **FREE** copy of valuable **BRAKE SERVICE MANUAL HU-411**.

**WAGNER LOCKHEED BRAKE PARTS,
FLUID AND LINING...AIR BRAKES...AIR HORNS...
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A57-12

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John J. Byrne
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F. C. [Jack] Webb
- 6 DALLAS
A. C. [Bob] Swygard
- 7 DENVER
E. P. [Ted] Muller
- 8 DES MOINES
Frank R. Johnson
- 9 DETROIT
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These are the friendly AROLUBE Division Managers whose sales-and-service staffs are nearby to assist you in all parts of the nation!

The combined experience of these 27 lube equipment experts totals 324 years . . . each man averaging 12 years with ARO! This means—the ARO Manager who serves your area can bring a wealth of know-how to your problems of lube department planning and service. He can help you *step up lube profits!*

It will pay you to call on this man and get acquainted. Ask him about the fast build-up of profit when you *go modern . . . go overhead with ARO!*

sales and service

Everywhere!



Go overhead . . . go modern with AROLUBE Reels to *save time and increase your profits!* Choice of reels for chassis, gear, motor oil, air, water, automatic transmission service. Today more than ever it pays to go overhead to get ahead!

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 Offices in All Principal Cities

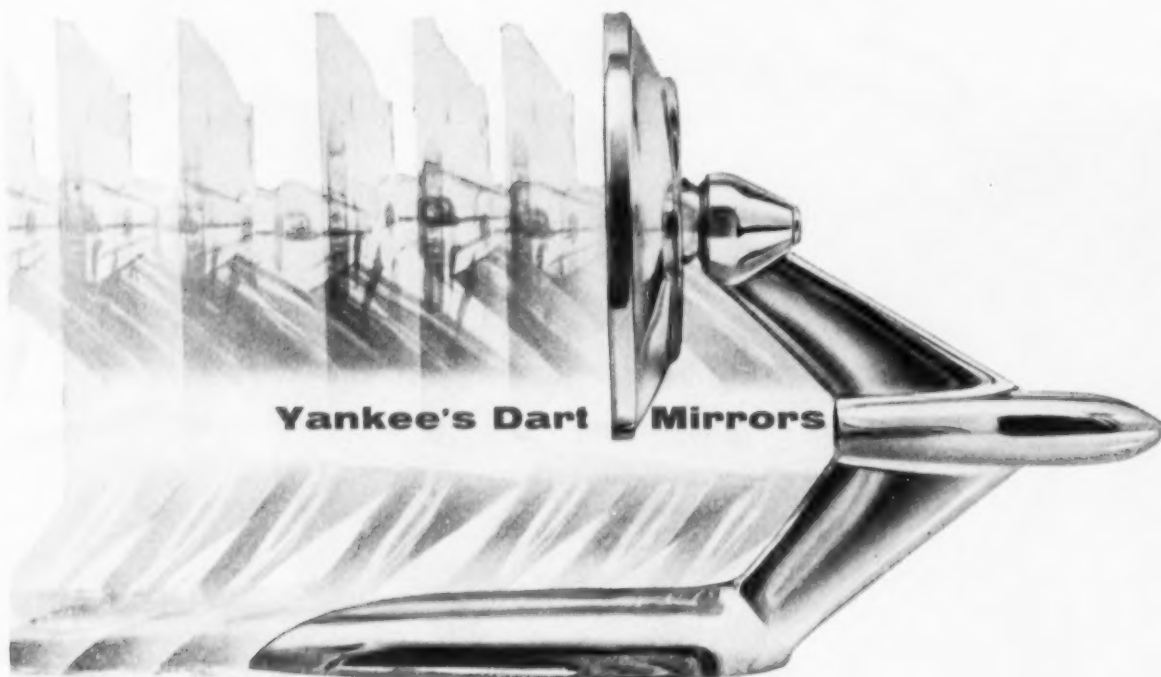


LUBE EQUIPMENT

Automotive—Farm—Industry
 Also . . . Air Tools . . . Aircraft
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It's a fact!



really move!

Ask your Yankee jobber about the free Dart display—
it's durable, it's colorful, it *sells Darts!*



Made exclusively by YANKEE METAL PRODUCTS CORPORATION, Norwalk, Connecticut

What makes customers come back for more?



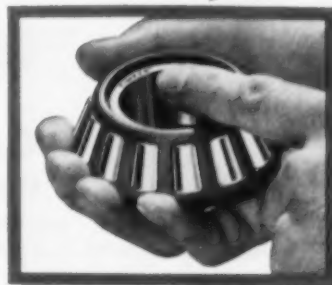
They'll all come back if you give 'em the best. When it's a bearing job... just tell 'em it's **TIMKEN®**!

Do you think giving 'em a free shoe shine while they wait would bring customers back for car repairs? Maybe. But the best way is to give 'em the best service. And the best service means the best replacement parts and workmanship.

When you replace bearings, be sure you use Timken® tapered roller bearings. Show your customers the trade-mark "Timken". They'll come back again and again, be-

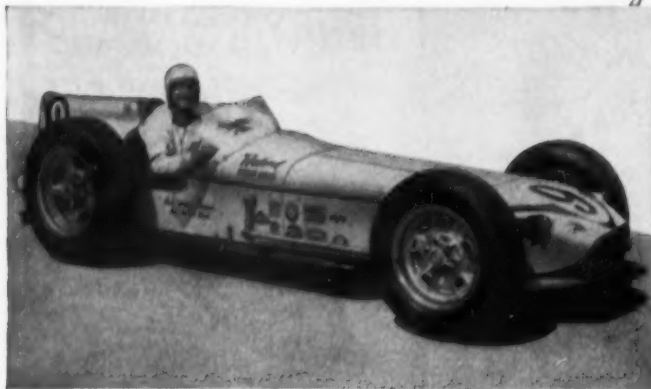
cause they know that Timken means quality. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable address: "TIMROSCO".

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS



NOT JUST A BALL ● NOT JUST A ROLLER ○ THE TIMKEN TAPERED ROLLER ○ BEARING TAKES RADIAL ○ AND THRUST ○—LOADS OR ANY COMBINATION *

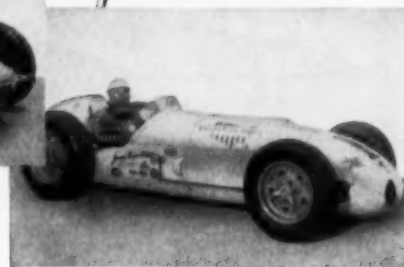
After 500 scorching miles at Indianapolis . . . cars with RAYBESTOS Brake Linings FINISH



1. Sam Hanks, record-breaking winner of the 1957 Indianapolis 500-mile race.



2. Jim Rathmann, runner-up in the "500."



3. Jimmy Bryan, third in the "500."

Winner

Sam Hanks reports:

**"Raybestos completely whipped the terrific
HEAT and WEAR brake problems in the '500.'"**

Sam Hanks averaged 135.601 mph to set a new record for the Indianapolis 500-mile classic. At speeds up to 170 mph he shot down the straightaways and battled the turns for 3 hours 41 minutes and 14 seconds. *Approximately every 30 seconds he put on his brakes. Here's what Sam says about them: "I used my brakes more this year than ever before—and this is my 12th '500.'" Sometimes doing 170 I'd get caught in a jam. My brakes always responded. And when I slid into those turns at anywhere between 140 and 150, I really needed good brakes. I guess I used my brakes at least 500 times, and that's giving*

them a beating at those speeds. We checked the linings at the end of the race. *There was only fifteen thousandths of an inch wear.* That fact by itself says more about Raybestos Brake Linings than I ever could."

Jim Rathmann, who finished only 18 seconds behind Hanks, is just as sold on new improved Raybestos Brake Linings. And so is third place finisher Jimmy Bryan.

You can help your customers lick heat and wear brake problems with new and improved Raybestos Brake Linings and Lined Shoes for both power and manually operated brakes.

Ask your
jobber-salesman
about the famous

Raybestos

**7 POINT
BRAKE
CHECK**

selling plan

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AMERICA'S BIGGEST SELLING FRICTION MATERIAL



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Get the Habit

"CLEAN-UP WEEK" is a national habit. It happens almost everywhere in spring and early summer. Folks roll up their sleeves and burrow into the attic, the basement, the closets and the garage to rid themselves of accumulated junk.

A great idea! But in this business we can't wait for clean-up week to come. It must be a constant and daily habit. For example, one garage owner makes it a point that when his crew knocks off for lunch—the first ten minutes is devoted to cleaning up and cleaning out. Work benches are put in order, floors are cleaned, old metal is junked. And every body starts fresh when the lunch hour is over. In that way, his shop is always in order.

No doubt about it a clean shop invites customers and keeps men and equipment busy.

Good Shopkeeping is a phrase MOTOR AGE cooked up a few years ago. It embraces all angles of good business. It not only means giving your place that "come hither look"—by a clean up, spruce up and paint up. It means more than that!

Good shopkeeping means good record keeping, good workshop conditions, friendly relations with employees and customers, smart selection of new equipment and tools, sound planning for your future. It all add up to good business and certain profits.

This is your special Good Shopkeeping issue. Friend, you are cordially invited to read this (and every issue of MOTOR AGE) from cover to cover.

A Note from George

OUR FRIEND and Washington correspondent, George Baker, tells us of a thoughtful service station operator down in Virginia. His service station sign reads: "BUZZ TWICE FOR NIGHT SERVICE — BUT KEEP YOUR SHIRT ON 'TIL I GET MY PANTS ON."

Faithfully yours,

Frank Tighe

EDITOR



of course I use Pedrick Formflex rings

what else?

The way Pedrick Formflex Chrome piston rings restore "new car" pep and power in any installation seems like magic. But there's really no trick to it. The secret is Pedrick's exclusive "Equalizer." Its soft but positive pressure everywhere around the circumference assures the utmost conformability. The result . . . a more perfect seal and therefore maximum compression, proper cylinder lubrication, reduced fuel and oil waste, long life. So, use Pedrick FORMFLEX CHROME Piston Ring Sets and it will be no trick at all to get results so good that they seem like magic!

Pedrick PISTON
RINGS



WILKENING MANUFACTURING CO., Phila. 42, Pa.
IN CANADA: Wilkening Mfg. Co. (Canada), Ltd., Toronto

executive section Jobber

News NotesFrom the Editors

ETI Takes Stand On Shows

AT ITS GENERAL MEETING IN DETROIT, LAST MONTH, Equipment and Tool Institute made known its stand on future shows. It recommended to all Regional Show sponsoring authorities in the U. S. that they "refrain from the conduct of any regional automotive product shows in any of their areas during the years 1959 and 1960."

ONLY EXCEPTION MADE was such shows which are immediately preceded by both the annual convention of MEWA and NSPA (and "preferably also the annual meeting") of MEMA. It further resolved to approve the Pacific Automotive Show in Los Angeles, in 1958.

ETI ALSO RECOMMENDED that the Automotive Service Industries Related Products Show--proposed for June 1958 in Chicago--not be held. It further recommended that if such a show be proposed for 1959 or 1960--that it be exclusively an automotive products show. Also that if such shows transpire, that they be sponsored by all three national associations--MEWA, NSPA and MEMA.

Analysis of Jobber Costs and Profits

A TEN-YEAR COMPARISON OF OPERATING COSTS, gross margins, and net profits (before income taxes) is a feature of a 16-page report issued by Motor and Equipment Wholesalers Association recently. It is titled "Cost of Doing Business in the Automotive Wholesaling Industry in 1956."

THE TEN-YEAR TABLE of facts and figures reveals a drop in net profit (before taxes) from 7.2 per cent of sales in 1947 to 2.5 per cent in 1954. This unbroken downward trend for seven consecutive years was finally reversed to 3.0 per cent in 1955 and 3.3 per cent in 1956.

Are Quantity Discounts Harmful?

QUANTITY DISCOUNTS FOR BIG BUYERS of auto tires and tubes will be eyed closely by a Senate Small Business group. A subcommittee with Sen. Humphrey, D., Minn., as chairman will try to find if current discount practices harm independent tire dealers.

FEDERAL TRADE COMMISSION several years ago ruled that maximum quantity discounts are limited to single carload lots. The FTC order, though, was upset in important court tests.

New Officers Elected for NCAWA

L. T. WHITE, JR., Motor Bearings and Parts Company, Raleigh, was elected president of North Carolina Automotive Wholesalers Assn., Inc. for the coming year. He succeeds R. E. Kirkland, who remains on the board of directors for another year.

ALEX STRICKLAND, Jewell & Strickland Auto Parts, Wilmington, was elected vice president. N. B. Starling, Motor Parts Warehouse, Raleigh, was elected treasurer.

Dummy Concerns Menace Businessmen

DUMMY CONCERNS RUN BY THIEVES menace businessmen and the public generally, the U.S. Post Office Dept. warns. Postal inspectors recently broke up one such bogus outfit, and 13 persons involved were convicted.

FAKE BUSINESSES LIKE THESE use false credit references to order merchandise by mail from honest suppliers. Upon delivery, the sharpers quickly sell the goods at below-wholesale prices and never pay the suppliers.

U. S. ECONOMY



Term Loans for Small Businesses

OPERATORS OF SMALL RETAIL OR SERVICE STORES may want to look into chances of a term loan when buying new equipment. Small Business Administration field offices have a new leaflet on this subject called Term Loans in Small Business Financing.

A BANK, THE LEAFLET RELATES, can set up term loans with a straight interest charge on the outstanding balance only. Interest may be as low as 2 per cent or as high as 10 per cent per year.

No Control Over Installment Credit

ALL OFF FOR THIS YEAR is any likelihood of government controls over installment credit. After putting out feelers to Congress about standby power to curb time payments, the Eisenhower Administration halts its efforts.

HELPING TO BRING ON THIS DECISION were findings of the Federal Reserve Board in a year-long study. Swiftly climbing consumer credit has just held pace with rising income, the Board decides.

OPERATION

JOBBER

Step up sales through direct mail

DIRECT Mail Advertising offers the automotive jobber endless ways to promote his business. And, at reasonable cost. Likewise, suitable materials are readily available from many sources. For example, from the jobber's suppliers or prepared by the jobber himself using a sprinkling of imagination and a goodly amount of initiative.

In considering the material available from your suppliers, bear in mind that only a few leading lines can be publicized over a period of a year. Most jobbers select twenty to twenty-five products and then concentrate their major efforts in mailing material these particular suppliers can furnish. At other times, additional products can be selected to keep the promotion program in proper balance.

1. Circulars or mail enclosures are almost universally provided by manufacturers. Use them and make sure they carry your firm name, address and telephone number. Mail them with invoices, statements, letters and with packages.
2. Letters, furnished by your suppliers with your imprint on your letterhead or

on four-page mailers, are excellent mailing pieces. The constant association of your firm name with nationally advertised products tells your customers and prospects where they can buy their favorite brands.

3. Catalogs supplied by manufacturers gain in popularity each year. But the distribution of catalogs, usually the costliest type of direct mail material, must be made on an extremely selective basis. Always make sure the right catalog is mailed or handed out by your salesmen, to the right names on your list.
4. Printed Announcements are used by a great many jobbers to keep customers and prospects regularly informed about new products, "deals," "specials," price changes, etc. There is an urgency about an announcement, like the daily newspaper, that usually gets attention.

Other Types Available

There are many other types of materials offered by the manufacturers whose lines you represent.

Consult with the factory salesmen and then carefully select only the material you can use to fill your direct mail advertising schedule for a period of six months to a year.

The direct mail ideas and material the average jobber can muster himself present unlimited opportunities. Enumerated here are just a few thought starters.

1. Your Salesmen, both inside and outside, should be publicized. Messages carrying pictures, nick-names and personal facts about your salesmen make their selling job easier. Announce a new salesman with an enthusiastic letter to his customers.
2. The famous-name products you proudly carry should be listed on letterheads.
3. House Organs are popular with hundreds of jobbers.

It will be up to you to carefully analyze your own business. Then sift out the important things you want to say to create a good impression. Direct Mail Advertising consistently used throughout the year can go a long way toward stepping up sales.

signs of the times

MEWA Elects Jay Davis President

During the 1957 National MEWA Convention, Jay T. Davis, The Motor Parts Company, Corpus Christi, Texas, was elected President of the Motor and Equipment Wholesalers Association. He succeeds Virgil C. Smith, President of Auto Parts Co., Inc., Ann Arbor, Mich.

Other newly elected officers are: A. J. (Orie) Thompson, Piston Service Inc., Seattle, Washington, Vice-President; J. Frank Enterline, Sunbury Auto Parts Co., Inc., Sunbury, Pa., Secretary; and James F. Lang, Motor Parts & Equipment Co., Fort Wayne, Ind., Treasurer.

MEWA members, through their regional balloting procedure, elected several new Directors to the MEWA Board: J. A. Bryant, Motor & Electric Supply Co., Inc., Bowling Green, Kentucky; H. F. Juneau, Juneau Supply Co., Wausau, Wis.; H. McMahon, Taylor, Pearson & Carson Limited, Edmonton, Alberta, Canada; Kindel Paulk, Paulk's Busy Corner, Wichita Falls, Texas; M. D. (Buck) Taylor, Taylor Parts & Supply Co., Inc., Andalusia, Ala.; and Emory R. Young, Motor Car Supply Co., Charleston, W. Va.

CRP Credit Group

Al Hetzel, Credit Manager of The AP Parts Corporation, has been elected president of the CRP Credit Group of MEMA. He succeeds Donald H. Smith.

Mr. Hetzel, a member of the



Top management of the Monroe Auto Equipment Company talk over their new product, the Monroe Load-Leveler. From left, C. S. McIntyre, Executive Vice-President and General Sales Manager, B.D. McIntyre, President, and W. D. McIntyre, Executive Vice-President and General Manager.

group for the past 16 years, served as vice president last year. He is now chairman of the Collection Committee of the Motor and Equipment Manufacturers Assn. He is also vice chairman of the MEMA Credit Department Executive Committee.

The CRP group is composed of credit executives from 34 manufacturers in the automotive replacement field.

Wanger Wins NSPA Young Exec Contest

Richard Wanger, assistant manager of the National Auto Parts Co. (Vallejo, Calif.), has been named winner of the 1957 Essay Contest of the Young Executives Club of NSPA. Announcement of the winner was made recently by Howard McMurchie, Club secretary.

Mr. Wanger's essay in the National Standard Parts Asso-

ciation contest covered the subject: "Imagination plus Manpower equals Profits." His prize was an all-expense trip to Columbus, Ohio. There he attended the sixth annual Wholesale Management Course.

Held last month, course was sponsored by the National Association of Wholesalers. Course ran for a week's duration. Place was Ohio State Univ.



McMurchie (right) congratulates Wanger for the winning essay.

NSPA Names Labor Relations Counsel

The appointment of Dr. Benjamin Werne, member of the New York Bar and a recognized authority on wholesaler labor relations, as Labor Relations Counsel for National Standard Parts Association wholesaler members was announced recently by J. L. Wiggins, executive vice-president of the Association.



Executives of the Schauer Manufacturing Corp., A. J. Kohn, president, (left) and S. E. Wright, vice president, sales, are shown with the Schauer line of Home-Type Battery Chargers. Firm is currently marking 50 years of manufacturing.

Plans Forming For 1958 P.A.S.

At a meeting of the Pacific Automotive Show executive committee in Palm Springs, Calif., the 1957 Show was formally closed. Plans already have been discussed and acted upon for the 1958 Show. Place for the '58 Pacific Automotive Show will be the Pan Pacific Auditorium in Los Angeles.

Dates set are Feb. 20-23, 1958. Officers for the '58 Show in-



The Highway Safety Program of The Champion Spark Plug Company, in which famous race drivers from the Indianapolis "500" speak to high school students on the subject of safe driving, has earned the company the National Safety Council's Public Interest Award. R. A. Stranahan, Jr., left, president of the company, and James F. Lewis, Jr., extreme right, receive the award for "exceptional services to safety" from Ollie Czelusta, mayor of Toledo, O., representing the Safety Council.

clude: P. T. Johnston, president; Robert D. Wootten, 1st vice president; Walter Olson, 2nd vice president; J. K. Wilkinson, secretary; and Andrew D. Shaw, treasurer.



Posing before a miniature of Hollywood-designed set that introduces Auto-Lite Sallerama '57 to automotive wholesalers are (left to right): M. H. Smith, General Sales Manager, Replacement Sales; D. B. Seem, Vice President, Advertising; Robert Price, Merchandising Manager, Batteries; J. L. Lingle, Merchandising Manager, Spark Plugs; and B. A. Noonan, Merchandising Manager, Service Parts. Covering 13,000 miles in 35 days, the Auto-Lite Traveling Theater, which includes large orchestra, live talent, wide screen film and special effects, began its journey last month.

Gabriel Awards Contest Prizes

The Gabriel Company's Adjustomatic Shock Absorber sales contest for warehouse distributor salesmen ended last month. First prize, a 1957 Thunderbird, went to Charles Bridwell, Georgia district salesman for the Thomas S. Perry Company, Gabriel distributor since 1955.

L. W. (Bill) Klein, vice-president in charge of sales for the Gabriel Company, also announced that the second prize, a color television set, went to Glenn Monroe of A & B Automotive in Oklahoma City, Oklahoma.

Third prize, an additional color television set, was awarded to Jack Kissell of Forshay-Gabriel, Inc. at Newark, N. J.

Polaroid Land cameras were awarded to ten other distributor salesmen in this national contest.



This giant cast precision tire mold makes a sizeable picture frame for an average-size secretary at the Medina, N. Y., plant of American Brake Shoe Company's Engineered Castings Division. The iron mold half, weighing 10,000 pounds, along with its mating half, is used for the production of tires with a diameter of eight feet.



New assignments among the top management group of Olin Mathieson Chemical Corporation include, left to right: John W. Hanes, retiring as chairman of the Finance Committee, appointed financial consultant and member of the Financial and Operating Policy Committee; Stanley de J. Osborne, formerly executive vice president for finance, named president of the corporation; John M. Olin, former chairman of the board, is now chairman of the Financial and Operating Policy Committee and continues as chairman of the Executive Committee; and Thomas S. Nichols, formerly president, appointed chairman of the board.

Ready to Build New Timken Plant

William E. Umstattd, president of The Timken Roller Bearing Company, has announced that formal negotiations with the state government of Victoria, and the federal government of Australia have been completed. Construction of a new 1½ million dollar Timken Company plant will get underway immediately. Output of this plant will be supplemented by bearing shipments from the United States in order to afford a complete range of bearing sizes to Australia, New Zealand, and the Far East.

New Warehouse

The AP Parts Corporation has announced the opening of a new warehouse at 3141 Locust Street, St. Louis, Missouri.

According to H. C. "Skip"

Stivers, AP sales manager, the new muffler and pipe headquarters was opened due to the increase of exhaust system business in the area.



Certificate of merit is awarded Auto-Lite distributor marking 25th year of Kentucky Ignition Company's association with The Electric Auto-Lite Company. Accepting the award for the firm, is E. A. Deiss (left), President of Kentucky Ignition Company. B. A. Noonan (right), Auto-Lite Merchandising Manager, Service Parts, made the presentation.

Industry Meetings

- Sept. 12-14—Automotive Parts Rebuilders Association convention and trade show, Congress Hotel, Chicago.
- Sept. 23-26—Automotive Advertisers Council fall meeting, St. Clair Inn, Detroit.
- Oct. 17-19—Automotive Wholesalers of Texas Convention and Booth Conference, Hilton Hotel, San Antonio.
- Nov. 2-4—Automotive Wholesalers Association of Louisiana convention and booth conference, Jung Hotel, New Orleans.

Purolator Buys Ringtown Plant

As a part of its expansion program, Purolator Products Inc., of Rahway, New Jersey, has purchased a 40,000 square foot plant in Ringtown, Pa.

The plant, which Purolator has been renting since 1951, lies within a few miles of Shenandoah, Pa., and was originally built by that town to attract industry. Present employment is around 170 men.

James D. Abeles, president of Purolator, stated that the purchase of the Ringtown plant was part of an overall program of expansion.



Students from Boston's Franklin Technical Institute attended the recent National Automotive Service Show in that city as guest of the Show's management. Here the group is conferring with Richard Buckley, NSPA automotive training program secretary (3rd from right); B. K. Thorogood, Director (2nd from right); and Franklin instructor L. W. Kerr (extreme right).

Automotive Wholesalers' Sales and Inventories

Data from Bureau of the Census, Department of Commerce

Region	Sales			Inventories	
	Per Cent Change				
	Apr. 1957 from Apr. 1956	Apr. 1957 from Mar. 1957	4 Mos. 1957 from 4 Mos. 1956	Apr. 1957 from* Apr. 1956	Apr. 1957 from Mar. 1957
Middle Atlantic	+19	+9	+9	+1	-1
East North Central	+9	+5	+8	+2	+1
West North Central	+3	+7	+11	+7	+7
South Atlantic	+19	+4	+6	+4	0
East South Central	+16	+4	+11	+4	+1
West South Central	+7	-3	+3	+10	+1
Mountain	+1	+5	+5	-6	-1
Pacific	+7	+10	+3	0	+2
United States	+9	+6	+7	+4	+1

Indicators of Business Activity

These figures are based on latest thirty-day reports

	Latest Data	Month Before	Year Ago	Percentage Change from—	
				Month Ago	Year Ago
PRODUCTION					
Motor Vehicles (Units)	632,632	654,857	567,951	- 3.4	+11.4
Industrial F. R. B. 1947-'49 = 100 (Adj.)	143	144	141	- 0.7	+ 1.4
SALES					
New Cars	535,000	548,609	560,014	- 2.5	- 4.5
Replacement Tires (Units)	5,988,621	5,579,212	5,760,754	+ 7.3	+ 4.0
Manufacturers (\$ Millions)					
Durable Goods	\$14,100	\$14,438	\$13,519	- 2.3	+ 4.3
Non-durable Goods	\$14,449	\$14,332	\$13,712	+ 0.8	+ 5.4
Department Stores, 1947-'49 = 100	124	122	122	+ 1.6	+ 1.6
GENERAL					
Consumers' Price Index, 1947-'49 = 100	119.3	118.9	114.9	+ 0.3	+ 3.8
Civilian Employment	65,178,000	64,261,000	65,238,000*	+ 1.4	- 0.1
Unemployment	2,715,000	2,690,000	2,608,000*	+ 0.9	+ 4.1

* Not strictly comparable with 1957 data.

Motor Age's Who's Who



Jack D. Zink, a vice president of The Howard Zink Corporation, was recently elected to succeed his father as president of the corporation and also as president of Consolite Corp.

Paul H. Davey, Sr., was elected chairman of the board of both the Davey Compressor Co. and Davey International, Inc. Succeeding Mr. Davey, Sr., as president of Davey Compressor Co. is his son, **Paul H. Davey, Jr.** New president and treasurer of Davey International, Inc., and general manager of Davey Compressor Co., is **J. T. Myers**.



Schuyler C. Reber has been appointed sales manager of the Automotive Lift Division of Rotary Lift Company, Memphis, Tenn. He formerly was sales manager of American Saw & Tool Co.

Robert H. Morse, Jr., was elected president and chief executive officer of Fairbanks, Morse & Co.

Joseph Hunter has been elected president of Hunter Engineering Co. **Lee Hunter** will assume the position of chairman of the board.



E. B. Hathaway has been elected vice president in charge of trade sales of the Firestone Tire & Rubber Co. He succeeds **H. D. Tompkins**, who will continue as a vice president of the company.

Robert T. Skilliter has been elected president and treasurer of The Acme Specialty Manufacturing Company. **J. Milton Hannes** has been promoted to vice president and **Walter J. Bohn** has been named secretary.



Leslie H. Bobo, left, has been placed in charge of the Mid-Continent area of the Wilkening Manufacturing Co. **John H. Bennett, Jr.**, has been named assistant sales manager, Southeast area.



R. C. Burchill, left, and **R. C. Long** have been appointed district sales managers for the Willard Storage Battery Division. Burchill will cover Eastern Pennsylvania and Long will cover Eastern Mich.

H. H. Clark was appointed assistant general manager of the Spring Division of Eaton Manufacturing Company. Others appointed were **R. G. Green** as sales manager of the Leaf Spring Department and **R. D. Morrison** as sales manager, Coil Spring Dept.

Raymond F. Allen has been appointed vice president and director of marketing and sales of the Thermoid Company, Trenton, N. J. Allen will supervise all sales activities of the company's multi-plant operation.



J. Robert Lakin has been appointed general sales manager of Moraine Products, Div. of General Motors, Dayton, Ohio.

George J. Weisenbach has joined the Wooster Rubber Company as assistant to the vice president in charge of sales.

Zac G. Drake has joined the sales management staff of Standard Motor Products, Inc., as field sales manager.

James P. Coughlin has been appointed general sales manager of Cushioning Products Division, Armour and Company, Alliance, Ohio.



David E. Wilcox has been appointed treasurer of Rinshed-Mason Company of Detroit.

Edward E. Bozyk has been appointed sales engineer on the staff of the Marshall-Eclipse division of Bendix Aviation Corporation.

W. S. "Bill" Nunn has been appointed western regional sales manager for Lempco Products.

James H. Thurow has been appointed division manager in Minneapolis for the Aero Equipment Corporation. He will be responsible for distributor sales in Minn., N. D., S. D. and 11 counties of Western Wisconsin.



No Nat'l Auto Show
AMC's 6-Cylinder
Plans Air Suspension
AMA For Safety, Not Speed
GM Plans Small-Car Sales
Air Conditioning Sales Up
Pacific Coast Line

No National Auto Show for '58

THE DECISION BY AUTOMOBILE COMPANIES to skip a National Automobile Show for 1958 cars has given rise to speculation that General Motors might revive its Motorama shows, which it discontinued last year. At the moment there definitely are no plans by GM to resurrect the extravaganzas.

GM CURRENTLY IS BUSY laying plans for its 50th anniversary which comes up next year, and which will be celebrated on a modest scale throughout 1958. It also is highly unlikely that any other company will put on special public shows in absence of the AMA-sponsored event.

AMC's 6-Cylinder Stresses Economy

AMERICAN MOTORS IS REVERSING the continual upward trend in sales of V-8 engines. While V-8's now account for a greater percentage of sales by most car makers, AMC currently is installing 6-cylinder units on approximately 80 per cent of Rambler production. This is indicative of a definite trend towards economy among Rambler buyers.

AS REPORTED LAST MONTH IN MOTOR AGE, American Motors in '58 is planning to bring out a 100 inch wheelbase Rambler. The report that Nash and Hudson models in 1958 will be confined to a wheelbase of 112 inches was incorrect. Wheelbase here will reach 117 inches.

Air Suspension For Ford, GM

AIR SUSPENSION WILL BE CONFINED to Ford and General Motors cars in 1958. It will be offered across the board on all Ford Motor Co. cars, including the Edsel, and is virtually assured for all GM divisions.

AIR SPRINGS WILL NOT BE a standard item on any of the lower-priced cars. American Motors had been considering air suspension, but definitely has ruled it out for 1958, may swing to it with 1959 models.

AMA Stresses Car Safety, Not Speed

THE BOARD OF DIRECTORS of the Automobile Manufacturers Association unanimously recommended to member companies that they take no part in automobile racing or other competitive events involving tests of speed and that they refrain from suggesting speed in passenger car advertising or publicity.

Car Production Schedules Adjusted

CURRENT HIGH FIELD STOCK OF CARS--estimated at between 775,000 and 790,000--should be pared substantially in the third quarter now that car makers have adjusted production schedules to more closely parallel the lower rate of sales. The total in inventories is still a bit under the record 800,000 units at the same time last year.

INVENTORIES COULD EASILY DROP by at least 300,000 units in the coming weeks at the present rate of production, placing makers in a good position in final quarter of the year. Many makers pared production considerably last month.

Automobile Air Conditioning Sales Up

THE CONTINUED UPWARD TREND in automobile air conditioning sales is illustrated by Oldsmobile. So far approximately twice as many air coolers have been installed on 1957 models as on previous year's models, the division notes. Indications are that 1957 will be a record year for Olds.

GREATEST DEMAND FOR air conditioners is in the southwest, Olds says, where ten out of 17 cars sold this year have been ordered with the units.

GM Moves Into Small-Car Field

GENERAL MOTORS' DECISION TO move into the small-car field with its 98-inch wheelbase European-built Vauxhall Victor and Opel Rekord came as no surprise. GM, as well as all other U. S. makers, have been watching the small-car uptrend for some time; GM decided now was the ripest time to test the growing market.

A TIP-OFF THAT GM was preparing to plunge into the market came when the corporation displayed the Victor Vauxhall in the General Motors Building in Detroit, first time a foreign-made car was exhibited in the GM showcase.

Production of Fuel Injection Units Down

SO FAR CHEVROLET HAS EQUIPPED only about 2000 cars with fuel injection. That's less than half of the original goal of 5000 installations this year.

PRODUCTION OF THE UNITS has been reduced to a trickle recently, so it is highly doubtful that the goal will be reached this year. Pontiac expected to build about 1500 fuel injection cars this year, has installed a limited number of them for dealer testing purposes.

Progressive Step

EFFECTIVE JULY 1, RALPH JAMES, executive director of IGO America, moved into new business headquarters. He is located in Room 344, Court Arcade Bldg., 6th and Boulder Sts., Tulsa, Okla.

Pacific Coast Line

Calif. Leads in Oil Consumption

CALIFORNIA, WITH FIVE AND A THIRD BILLION GALLONS led the nation in 1956 in the consumption of petroleum products. This figure, which includes fuel from government sales, represents an increase of one and three-quarter billion gallons over the 1955 figures.

FOLLOWING CALIFORNIA WERE TEXAS, with four and one-half billion gallons; New York, with three and two-thirds billion, and Ohio, with slightly more than three billion.

IGO Grows Stronger in California

IN AN EFFORT TO CONSOLIDATE the efforts of the garage and repair trade in California through Association activity, local groups in Fresno, Ventura, Santa Rosa, Modesto and Stockton have become affiliated with the Independent Garage Owners of California.

THE RAPID GROWTH OF IGO in California points toward a unified group at the retail level of the automotive maintenance industry in California, providing a strong feature in the manufacturer through wholesaler to retailer method of distribution.

Washington Wire



Legislative Issues Favored by NADA

A FULL SLATE OF LEGISLATIVE ISSUES for 1957-58 occupies the National Automobile Dealers Assn. These are some of the matters before Congress that NADA favors: Tax relief for small business. Improvement of federal tax lien rules.

TAX EXEMPTION FOR CERTAIN driver-training cars. And NADA strongly opposes changing the minimum wage law to include retail and service businesses, because of the overtime problem.

Stricter Vehicle Safety Standards Urged

RADAR CONTROL EQUIPMENT on passenger cars could do much to protect motorists, insists Rep. Lane, D., Mass. He has in mind devices that would slow or stop a car when it crowds close to another object.

MR. LANE HOLDS THAT too much stress is placed on the car styling and not enough on driver safety. He wants Congress to look into the possibility of putting vehicle safety standards under federal management.

Auto Bootlegging Plagues Dealers

FOREMOST COMPLAINT FROM NEW CAR DEALERS is still about auto bootlegging. Mail received on Capitol Hill shows the channeling of cars to unlicensed sellers is a much greater worry than franchise disputes with the factories.

LAWMAKERS WOULD LIKE TO HELP the franchised retailers fight off unfair competitors. The trouble is that Congress is not sure what kind of law would stop the bootlegging evil.

NADA's Customer Labor Sales

CUSTOMER LABOR SALES by National Automobile Dealers Assn. members averaged \$254 per new unit sold, from January through March. Parts sales per new car or truck retailed came to \$363, on the average.

PROFITS FOR NADA DEALERS as a group rose to 1.4 pct before federal taxes in the January-March quarter. Despite the total gain, one dealer in five registered a loss in those months.

Federal Regulation of Car Building

REP. BENNETT, D., FLA., REPEATS HIS CALL for federal regulation of car building as a means of getting safer autos. His bill to have the Secretary of Commerce set minimum safety standards for the auto industry remains before Congress.

IN HIS VIEW, IF ONE COMPANY alone turned out a lower-powered car with better protective features it would lose buyers. Too often, safety devices do not help create sales appeal, he argues.

Consumers' Pockets Are Jingling

THERE'S PLENTY OF JINGLE in consumer's pockets at this season. Personal income in May was at a rate that would surpass \$340 billion if carried through an entire year.

IN APRIL, THE RATE was \$339.3 billion. Trade, construction, finance, and state and local government workers got bigger paychecks in May. Wages and salaries, over-all, were more than \$1 billion ahead of those in the first three months of 1957.

Wants to Make Car Stealing Tougher

EVEN YOUNGSTERS, USING NO KEYS, are able to steal cars today, complains Sen. Butler, R., Md. He has information that many youths are driving away in cars they don't own, thus getting into a tangle with the law.

BUILDERS OF CARS CAN HELP straighten out this problem with technical changes in their products, he believes. Sen. Butler writes to the major car producers, asking what they think can be done.

NADA Working to Amend Tax on Dealers

ANOTHER ITEM OF MAJOR INTEREST to NADA is amendment of the Internal Revenue Code treatment of dealers' reserves. NADA in June was working on a proposed bill to protect dealers from being taxed on money not actually in hand.



By C. D. Zahnd

Good Shopkeeping

A NEW APPROACH TO AUTOMOTIVE ACCOUNTING

Topnotch office manager gives step by step account of time-saving system

HOW would it sound if we were to say: "Forget all you have ever read about machine accounting for an automobile dealer. It's outdated!"

A statement like this looks like a real exaggeration. And it looks as though we are boasting—no doubt about it. But give us a chance to prove (1) that the new system we'll tell you about is far more advanced than any method now in use, and (2) that we aren't boasting, because we didn't invent

the new machine tools of the office that make it possible.

As anyone in this business knows, the big problem in automotive accounting is "breaking out" sales and internal charges into all of the many classifications needed—and demanded—for proper operation. Sales and cost of sales must be classified by scores of different accounts.

The handwritten method of doing the job
(Continued on page 38)

Repair order figures are analyzed by machine and also printed on tapes.

MASTER TAPE

11	6671	2.00	11.10
11	6671	12.00	6.50
11	6671	9.00	6.70
11	6671	15.00	3.85
11	6671	9.00	.10
11	6671	2.00	6.50
11	6671	2.00	200.10
11	6671	2.00	230.60
11	6671	2.00	191.15
11	6671	2.00	66.91
11	6671	2.00	.08
11	6671	2.00	10.56
11	6671	2.00	7.09
11	6671	25.00	18.10
11	6671	00	852.67
11	6671	25.00	852.67
11	6671	25.00	161.50
11	6671	25.00	120.00
11	6671	25.00	108.55
11	6671	25.00	50.82
11	6671	25.00	.50
11	6671	25.00	27.31
11	6671	25.00	6.32
11	6671	00	148.50
11	6671	25.00	148.50

REPAIR ORDER FORM

NOVEMBER 1957

100 South 6th Street Phone 4-7483
ST. LOUIS, MISSOURI

AND WHEN IS COMPLETED BY DATE AND
HOW THIS ORDERED SERVICE WAS:

NAME: *E. E. Smith* DATE: *11/10/57*

ADDRESS: *1000 10th Street*

MAKE: *Pontiac* MODEL: *Wildcat* YEAR: *1957*

CHASSIS NO. *10-80* ENGINE NO. *10-80*

TRANSMISSION: *Manual* COLOR: *Black*

VEHICLE TYPE: *Passenger Car*

REPAIR ORDER NO. *1000*

DATE OF ORDER: *11/10/57*

DATE OF COMPLETION: *11/10/57*

REPAIRS: *Check & Repair Brakes, Replace front brake shoes*

REPAIR COST: *148.50*

SALES TAX: *6.32*

TOTAL: *154.82*

SALES TOTALS

11	6671	25.00	148.50
11	6671	25.00	120.00
11	6671	25.00	108.55
11	6671	25.00	50.82
11	6671	25.00	.50
11	6671	25.00	27.31
11	6671	25.00	6.32
11	6671	25.00	148.50

COST TOTALS

... automotive accounting

is to have huge spread-sheet type journals, with a multitude of columns for the various breakdowns. No need to dwell on the difficulties inherent in a pen-and-ink setup. Sufficient to say that it's slow and therefore costly, and that it is subject to a great

many errors. Many dealers who feel that they are "doing all right" with a hand system would be amazed to learn how much time and labor are involved in getting the work done.

(Continued on page 76)

[illegible]

Above: Parts sales are analyzed at retail and cost. Below: Accounts Payable set-up. Invoices are journalized, vouchered, and distributed.

[illegible]

Paint more light on the subject

A clean shop and a well-lighted shop are agreeable to both employee and customer

TRY this little test. Shine a flashlight into a coal bin and see how much light is absorbed by the black coal and dirty walls. Now shine the same flashlight into a gleaming white kitchen. Notice how much more efficiently the light is distributed around the room. The light source is the same in both cases, but the kitchen appears much brighter by comparison. Obviously, cleanliness and right shades of paint add much to appearance and lighting conditions.

The same principle applies to the automotive service shop. Only not quite to such extremes. The overall efficiency of your lighting system depends on two things: the amount of light you place in the shop; and the ability of the walls, ceiling, and floor to reflect it around in the work area where it can be used. And believe it or not, the proper choice of colors used on walls, ceiling, and floor can spell the difference between an efficient lighting system and a poor one.

Generally speaking, a light colored wall will reflect more light than a dark colored one. A clean wall will reflect more light than a dirty one. Here's where shop cleanliness figures in once more. The darker the surface, from any cause, the more light it will absorb to be wasted.

White, for example, gives back 85 per cent of the light that falls on it, while grey reflects only 45 per cent. These percentages are known as the reflection factors of the finishes, and are commonly listed as such on lighting and painting charts.

Color	Percentage of light reflected
White	85
Grey white	80
Cream	75
Light tan	70
Light green	70
Pale yellow	65
Light grey	55
Medium grey	45

From this reasoning, it would seem that an all white shop might be the most efficient from a lighting standpoint — and theoretically, this is true. But more practical considerations rule out such an idea.

In the first place, an all white shop would be extremely monotonous. The people working there would soon become annoyed and distracted. In addition, the glare from such an expanse would be extremely uncomfortable. There wouldn't be enough hours in the day to keep it clean.

Obviously then, the desirable color combination would have to be a compromise between efficient distribution of light, comfortable working conditions, and practical maintenance. However, this presents no problem;

(Continued on page 96)

Good Shopkeeping



There's a right and wrong way to lift.

SELLING SHOP SAFETY

GARAGE and service department safety programs need plenty of variety to spark employee interest in an accident prevention attitude. Workers in the shop get lulled into a sense of false security unless something is done to stimulate interest in accident prevention around the shop.

Here is a round-up of ideas that have been

used in various service department and garage safety programs to revive employee interest in the firm's safety program:

SALES DEMONSTRATION: Several garages have found that sales demonstrations of safety clothing are effective. A representative for a safety clothing manufacturer sets up a display in the shop. Employees shop on company time and get credit for safety clothing purchases through payroll withholdings.

Automobile dealers and garage owners who have held sales demonstrations in the shop have a few warnings. It is wise to look over the complete line of safety clothing before it is offered to the employees. This includes a check on the value and on the price of the clothing being demonstrated.

One garageman held a sales demonstration for safety shoes. The idea seemed to be going over good and most of the workers in the shop were visiting the demonstration. A check on the sales demonstrator revealed that he was showing safety shoes, but was doing a land office business for other types of shoes.

COMPANY PURCHASES: This safety stimulating idea is worked in cooperation with the purchasing department. A list of approved safety clothing is prepared and distributed to all employees. A handy-check list

Enduring safety programs for shop and service departments need the attention and interest of Management if the programs are to succeed



Time out for safety shoes.



Bulletin board reports on accidents.



Employee safety slogans.

order form is prepared and all employee orders are pooled for fast delivery and for more reasonable prices.

Even if the employee response is not overwhelming to this offer to purchase, there is a subtle safety reminder given everyone in the garage. They become safety conscious for a time after the printed lists are distributed.

Holds Safety Show

One garage owner hit on the idea of a safety show to stimulate interest in safety. This carried through in a fast moving approach to the whole problem of safety. The right and wrong way things in the garage was covered by employees who illustrated the various types of mechanics in the shop.

For instance, one of the mechanics illustrated the "Show Off" and did things that any man in the shop would not think of doing. "The Strong Man" was exemplified by a mechanic who demonstrated his great lifting power (the wrong way) and was finally shown up by his ten-year-old son who lifted in the correct manner.

SAFETY SLOGAN: Prizes seem to stimulate interest in any program. Safety is no exception. One garage worked out a safety slogan contest. Everyone in the garage was

eligible to enter any number of slogans in each month's contest.

Winners usually twisted a popular saying into a safety slogan. For instance, the "jive talk" expression, "Don't be a square," was used in a prize winning safety slogan, "Don't be a square—stick a round."

Even if the slogans submitted are not as good as the professionally prepared safety slogans, the effect is usually better. The winning slogan will catch on in the garage and be remembered. Everyone will be using it because it was created by a fellow-worker in the garage.

SHOWMANSHIP: Anything that can be done with a flourish to add a little showmanship to the safety program will act as a stimulant. A mechanical man that shows the strain on the back caused by improper lifting, for instance, is used by one garage to tell an old safety story in a new, memorable way.

To add showmanship to your safety program, you can take some annoying accident problem. First, find the cause of the problem and then dramatize it in an unusual manner. An easy way to do this is to translate the statistic into something that is easy to visualize . . . the cost of the accident, for in-

(Continued on page 96)



IGOA Leaders (l. to r. seated) Ralph James, Tulsa Executive Director; Howard Eves, Pasadena, retiring president; Paul O. Wilson, Toledo, president; Harold Grindle, Toledo, Exec. Director, IGO of Ohio; (l. to r. standing) Art Kittell, Pittsburg (Kan.) 3rd vice-president; W. C. (Josh) Wilder, Nashville, secretary-treasurer; H. F. (Red) Reagin, Atlanta, 2nd vice-president; Ray J. Campbell, Denver, 1st vice-president.

"ON THE BRINK OF SUCCESS"

So stated Ralph James, Executive Director of Independent Garage Owners of America, as he joined other industry leaders at Second Annual Meeting

Toledo, Ohio. As MOTOR AGE goes to press, Independent Garage Owners of America held its second annual convention. Newly elected officers are shown above. Board of Directors acted to make more valuable IGOA members service to public.

Educational committee presented and delegates adopted national standards for apprenticeship training program. Will work through Department of Labor and State Education Boards.

Safety Committee recommended uniform national automobile inspections, semi-annually performed by skilled mechanics in pri-

vate garages. Also, that all IGOA members make regular practice of inspecting customers cars for safety.

IGOA membership now in 24 states, with 80 units and 2500 active members; 47 allied members.

Pictures Next Month

A full coverage of the IGOA 2nd Annual Convention will be included in the August issue of Motor Age. Watch for it.

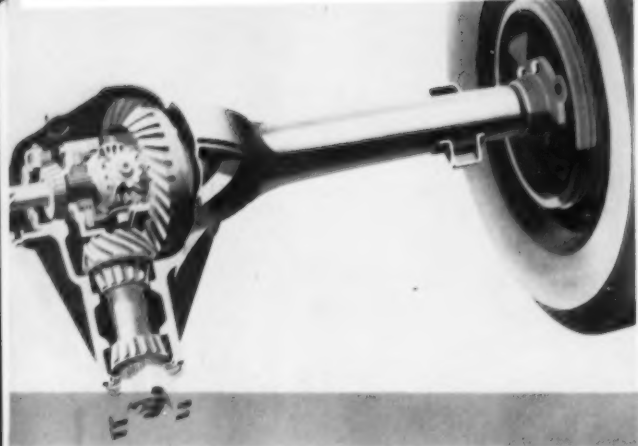


Code of Ethics

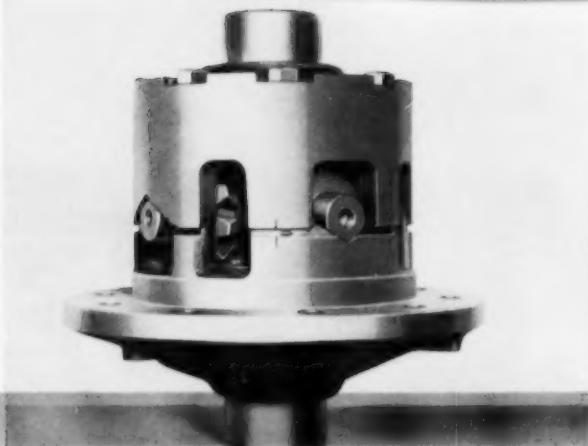
INDEPENDENT GARAGE OWNERS OF AMERICA*

- To promote good will between the motorist and members of this Association.
- To perform high quality repair service at a fair and just price.
- To have a sense of personal obligation to each individual customer.
- To employ the best skilled mechanics.
- To use only proven merchandise of high quality distributed by reputable firms.
- To itemize all parts and mechanical adjustments in the price charged for service rendered.
- To retain all parts replaced for customer inspection.
- To uphold the high standards of our profession and always seek to correct any and all abuses within the automotive service industry.
- To uphold the integrity of all members of IGOA.

* Code adopted at the second annual IGO Convention, June, 1957



Cut-a-way of how the power is transmitted from the ring gear to the differential case of car.



The differential case halves should be clearly identified with scribe marks to aid reassembly.

SERVICING GM'S NON-SLIP

The article below tells how to correctly service the new type non-skid

OPTIONAL equipment on Chevrolet passenger cars and Corvettes this model year includes a new type differential designed to give traction to either rear wheel. Called "Positraction," this non-skid differential provides "built-in" safety through controlled driving power.

The differential adjusts automatically to conditions of the road. Ordinarily, torque is provided equally between driving wheels on conventional differentials. As the torque tends to drive the wheel easiest to turn this is a definite disadvantage under conditions of ice or snow or mud where traction of one wheel is limited.

The "Positraction" provides many times the torque of the slipping wheel to the other wheel on firmer ground. Power here is transmitted from the ring gear to the differential case.

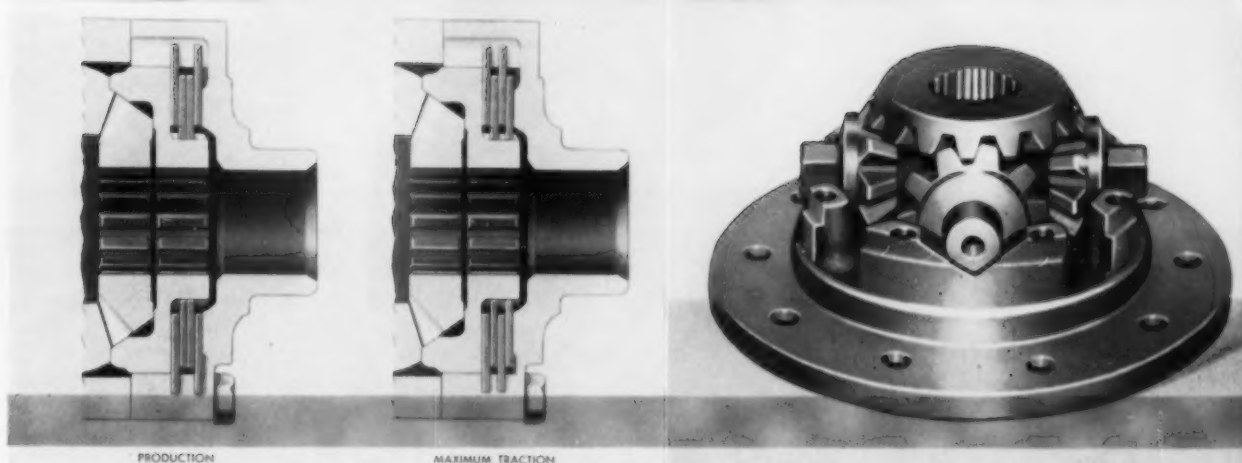
The driving force causes cross-pins to move up ramps of cam surfaces applying a

load to the clutches. In effect, this locks the axle shafts in normal straight ahead driving. Momentary spinning of the wheels is thereby prevented should the car leave the road or encounter poor traction.

The division of torque between axle shafts varies in accordance with the traction of each rear wheel. When cornering, however, the faster turning outer wheel relieves the load from the clutch surfaces. Wear is reduced. Action is effectively that of a conventional rear axle.

This rear axle and the differential assembly is also available as a parts package for field installation.

To remove the unit, remove the carrier in the conventional manner. Then check that the differential case halves are marked with a number or letter to aid in aligning the case when assembling. If not, scribe alignment marks. With unit on the bench, remove eight attaching bolts, end housing, clutch plates



Viewing the clutch stacks, (production and maximum traction) which can be tailored to owner's choice.

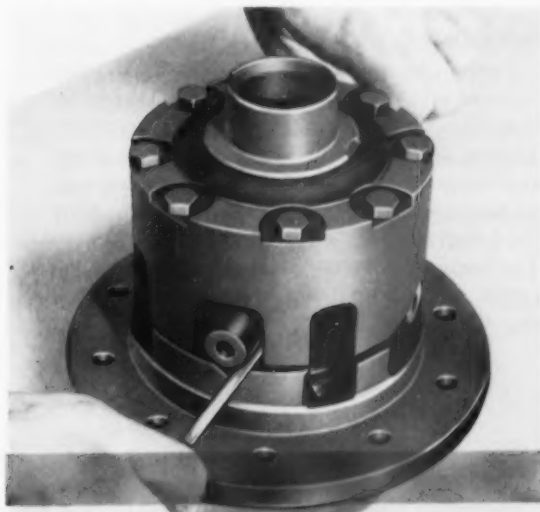
Above is shown the gears set in proper position before installing other half of case.

DIFFERENTIAL

differential offered as a Chevrolet option

By JOHN K. MONTGOMERY, Technical Editor

Checking clearance between pinion mate shaft and "V" of case. It should be .010 to .035".



from side gear retainer and note the relation of these clutch plates.

Remove side gear retainer and side gear and pinion mate shafts and gears. Remove remaining side gear, side gear retainer and clutch plates. All parts should be cleaned and inspected at this point. Make sure that there are no worn, cracked or distorted clutch plates. All parts must be free of nicks, burrs, or any imperfections that will reduce the efficiency of the operation of the unit.

Plates Stacked Alternately

In cases where the owner desires maximum traction for off highway operation or high performance operation for competition, the clutch plate should be stacked alternately. Start with an internal splined plate against the differential carrier or case. When stacking is completed, car owner should be cautioned that tire squeal on turns and a tendency toward oversteering is now to be expected.

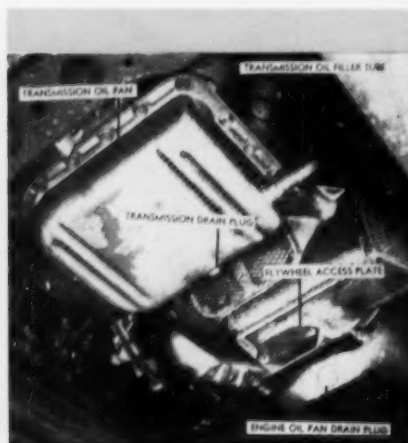
With this type differential driveline backlash is more noticeable. Greater looseness is required between the clutch plates and side gears to insure sufficient clearance for full release of the clutches during the coasting period. This backlash results in a slight clunk as the drive line goes from drive-to-coast or from coast-to-drive.

To determine if backlash is abnormal proceed as follows: Remove one rear wheel, then tighten brake adjustment in the opposite wheel until it is fully locked. Place wedge

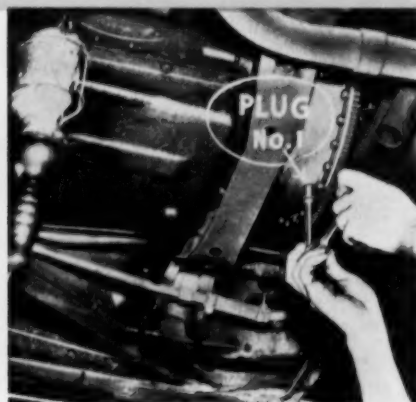
(Continued on page 98)



Dynaflo: View of correct location of flywheel drain plug after pan is removed.



Powerflite & Torqueflite: View shows transmission oil pan, drain plug, oil filler tube and flywheel access plate.



Hydra-Matic: Turn the flywheel until converter drain plug is at bottom. Then remove plug.

● DRAINING AND REFILLING AUTOMATICS

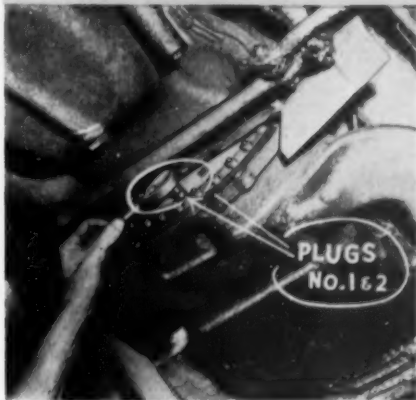
By EDWARD K. SHEA

ONE hardly needs stress the importance of maintaining proper fluid level in automatic transmissions. But it is nevertheless a good point to bring up to your customers from time to time. Remind him of the need for draining and refilling transmission fluid at regular intervals.

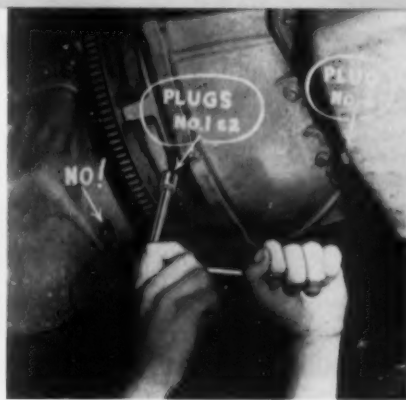
When draining and refilling automatic transmissions, the following condensed outline of popular models and makes of transmissions should be quite helpful:

Buick Dynaflo

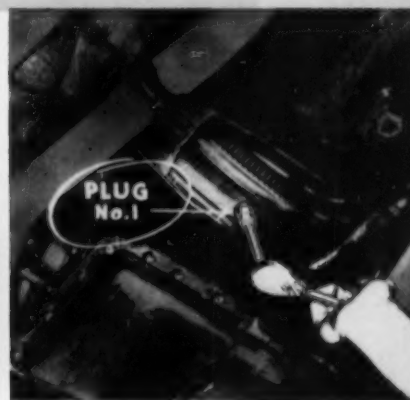
Drain and refill every 25,000 miles. Operate engine to thoroughly warm transmission oil. Turn off ignition and drain transmission and converter. Reinstall drain plugs and pour 3 quarts of Type A automatic transmission fluid into transmission. Now start engine and place selector lever in Park. Then add 5½ more quarts and check level again. Warm up transmission and recheck oil level.



Ford-O-Matic: Remove converter drain plug. Rotate it 180 degrees and remove second plug.



Ultramatic: Loosen converter drain plug and turn flywheel a half turn to remove the second drain plug.



Studebaker: Remove converter drain plug. Turn flywheel, remove second plug.

All Hydra-Matics

Drain and refill every 25,000 miles. Check oil level every 2,000 miles. Drain transmission oil pan and torus member. Reinstall drain plugs and tighten. Open hood on some models and on others roll back the floor mat for access to filler pipe. Add 8 quarts of automatic transmission fluid having qualification number AQ-AFT into oil filler pipe. Place the selector lever in "N" or "P" (Neutral or Park) and run engine on fast idle for a few minutes.

Return engine speed to curb idle and add 2 quarts of fluid. Check the dip-stick if the level is not up to the "F" mark. Add the balance of oil as required. Note: Add ½ quart at a time to avoid overfill.

Chevrolet Powerglide

In normal operation Chevrolet does not recommend draining the torque converter; in fact, starting with 1953 the converter has no drain plug.

Drain and refill every 25,000 miles. Check oil level every 1,000 miles. Drain converter and oil pan. Reinstall drain plugs and open the hood to pour 3 quarts of automatic transmission fluid having qualification number AQ-AFT into the oil filler pipe. With the hand lever set in Neutral, start the engine and let idle. Add 6 more quarts of oil and

let transmission thoroughly warm up and recheck oil level.

Chevrolet Turboglide

Drain and refill every 25,000 miles. Check oil level every 1,000 miles. (Note: The converter has no drain plugs.) Start the engine and run to warm up transmission. Shut off ignition and remove the drain plug from the front end of transmission oil pan. Reinstall drain plug and pour 3½ quarts of Type A fluid into the transmission. Start the engine and allow to idle with hand lever at Neutral. When transmission is up to operating temperature recheck oil level.

Chrysler, De Soto, Dodge and Plymouth Powerflite and Torque-Flite

Drain and refill every 20,000 miles. These transmissions found on Chrysler Corp. cars. Check oil level every 1,000 miles. With engine and transmission at operating temperature, turn off ignition and remove transmission oil pan drain plug. If no drain plug, remove nut holding filler tube to transmission oil pan.

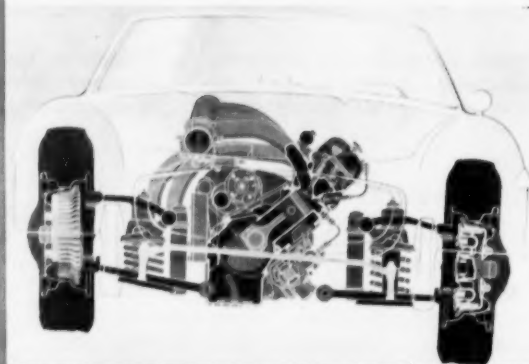
Remove the access plate from the bottom of torque converter bell housing. Remove converter drain plug. Replace drain plugs and pour in 5 quarts of Type A fluid and

(Continued on page 106)



1957 Scotsman Champion 4-door sedan.

NEW SCOTSMAN BOWS



Front end design of the new 300SL.

Studebaker-Packard dealers will also offer sports car line made by Daimler-Benz of Stuttgart

WITHIN recent weeks two new lines of cars have been introduced by Studebaker-Packard corporation. The Scotsman line features three models—two and four-door sedans and a two-door station wagon. The other line will be sports cars made by Daimler-Benz, A. G., of Stuttgart, Germany. Latest of these models is the new Mercedes-Benz 300SL Roadster. It will be sold through Studebaker-Packard dealers in this country.

The Studebaker Champion Scotsman line

is reported as "America's new economy car." Price for the two-door sedan is suggested as \$1,776. Car comes equipped with heater, defroster, turn signals. Standard equipment on the Scotsman is a 3-speed manual shift transmission. Overdrive is available as an option.

Power plant is a 101 hp, six cylinder engine. Displacement is listed as 185.4 cu in. with a 3 in. bore. Stroke is 4.38 in. Compression ratio is 7.8 to 1.

A single barrel carburetor is used on the sedan models while the station wagon's engine uses a two-barrel carburetor. Wheelbase for both the sedans and the station wagon models is listed as 116.5 in. Overall length is also similar—202.4 in.

Tire sizes on the sedans are 6.40 x 15 and for the station wagon, 6.70 x 15.

(Continued on page 114)



Three generations of the Thornton's: President George (Pat) Thornton stands by the portrait of his father, the late Samuel Thornton who in 1907 helped to found the firm. Sitting in chair is Pat's son, Frederick, general manager of Thornton-Fuller and grandson to Mr. Samuel Thornton.

By W. H. WOLFE, Managing Editor



CELEBRATES GOLDEN ANNIVERSARY

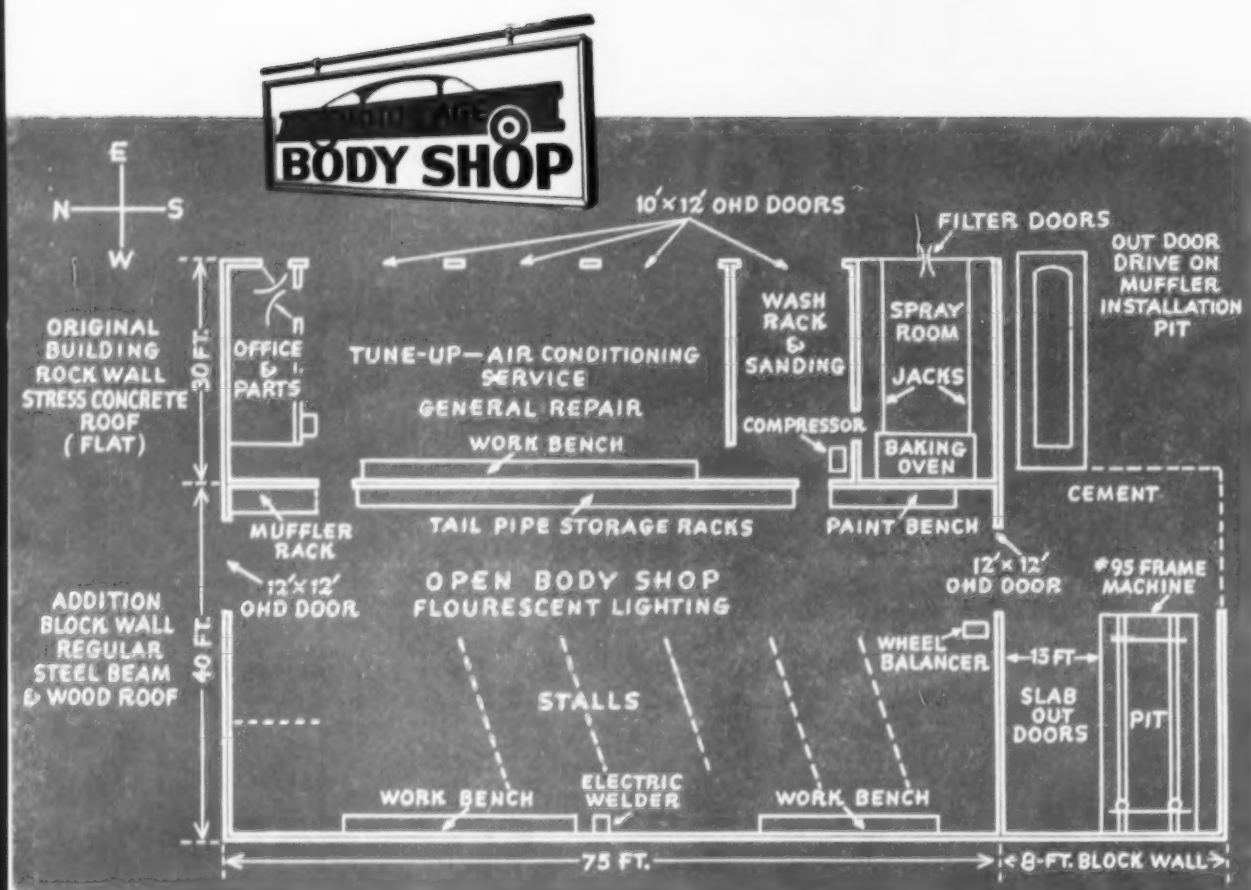
Thornton-Fuller marks fifty years of service in the automotive industry

PHILADELPHIA is a city of institutions. One in the transportation field is the new and used car agency of George (Pat) Thornton, president of the firm his father founded some 50 years ago.

Back in 1907, Samuel Thornton joined forces with Lawrence Fuller to set up a dealership to handle the sale of Simplex cars.

The firm of Thornton-Fuller prospered immediately. In 1914, the firm took on the distributorship of Dodge cars in the Philadelphia area and has been selling Chrysler Corp. cars ever since. Today the firm's business volume amounts to about \$1 million monthly.

(Continued on page 116)

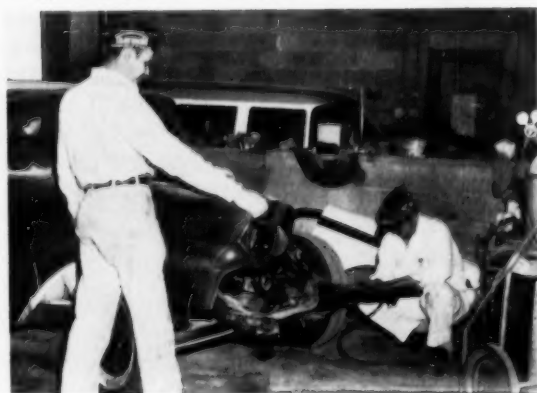


QUALITY NEVER HURTS VOLUME

ROY Gallagher, owner and operator of Roy's Automotive, in Las Cruces, New Mexico, was forced to more than double the size of his shop in order to take care of his increasing volume. And all because he raised prices and concentrated on quality work.

Two years ago, Roy opened his shop measuring 30 x 75 feet on the outskirts of

Roy's equipment is complete and up-to-date.



Service shop specializing in body and paint work found that concentrating on quality sparked an increase in business and need for more floor space

town. Roy chose this off-the-highway location so that he could have plenty of parking space and have a rental he could afford to pay.

As a journeyman mechanic, while working in various shops, Roy was alert to the fact the best shop business was solicited work. "Drop in work," he said, "never was sufficient to rely on."

To get his shop going without any delay, to assure himself of an immediate income, and to keep his mechanics busy with no standby time, Roy went out and got himself some insurance and wholesale accounts.

That was all right. His mistake was in having too low prices.

"For example," Roy explained, "I had paint jobs priced as low as \$35. I was deluded into believing this low a price would get me volume."

It didn't.

Roy found, regardless of the low price, the customers demanded a top quality job. On a \$35-\$40 paint job there was a gross profit of approximately \$8.

Volume was impossible.

The bulk of the body and paint work had to be done for the various local insurance adjusters. Their clients vigorously objected to

settling for a "cheap paint" job. Furthermore, the adjusters themselves were reluctant to try and get their claims to take their car to a low priced shop, thinking ahead to rewriting their expired insurance. "To turn out a creditable job," Roy explained, "It cost us just about as much to turn out a \$35 job as it does to turn out a \$75-\$80 one." Consequently, he discontinued his reduced rate jobs, concentrated on quality. Now, paint jobs gross him a fair profit.

Fast Service Demanded

Along with quality workmanship, Roy's customers wanted and demanded fast service. In this type business, getting a job out in fast order often is beyond the control of the shop owner. Parts houses and dealers' parts managers may not have available parts for cars more than 2 years old. And a job will be held up waiting for special delivery.

To cope with this situation, Roy has made contact with various wholesalers around the country he can depend on to have what he wants in stock. A long distance phone call gets these parts on the way immediately. This small additional cost is easily absorbed.

In replacing damaged bumper face guards,

(Continued on page 104)

Paint oven helps supply excellent finishes.



Roy's customers demand and get fast service.



MOTOR AGE SHOP CLINIC



An absorbing and easy-to-take type quiz based on the service article which begins on page 44

QUIZ

FOR JULY, the Motor Age Shop Clinic Quiz deals with the article on Chevrolet's "Positraction" non-skid differential. This service article begins on page 44 of this issue. It's called "Servicing GM's Non-Slip Differential."

After taking the Quiz, you can check your answers against those in the inverted box elsewhere on this page.

Quiz Begins Here

1. What is the general purpose of the Positraction differential?

2. When removing the differential from the car for service, it (may be; is absolutely) necessary to scribe alignment marks. Why?

3. If a customer wants maximum traction from the differential the clutch plates (should; should not) be stacked alternately.

4. If customer has clutch adjustment made on the differential in order to get the "extra" or maximum traction, what two conditions may show up on his car that he should be advised about?

5. When testing to find if

backlash is normal (do; do not) place wedge blocks beneath propeller shaft to hold it stationary. Why?

6. When re-assembling the differential, how do you determine if axle shaft is fitted correctly?

True or False Section

7. When replacing the differential case, the eight carrier attaching bolts should be torqued evenly to about 35 to 45 ft lbs.

8. Caution: Do not spin wheels with one wheel elevated. It is possible to have sufficient driving load due to friction and so forth to actuate the Positraction unit and cause car to move or jump off the jacks.

9. Should it be necessary to install a new pinion and ring gear set in a Positraction-equipped axle, use lubricant packaged with the pinion and ring gear set.

10. Where the stub axle will turn after the addition of a .005 inch shim, it is good practice to add shims in .002 inch increments until the axle locks. Then remove the last .002 inch shim.

ANSWERS TO QUIZ (hold page upside down)

1. Enable both rear wheels to find traction; shift torque from spinning wheel to the pulling wheel which itself is on firmer surface.
2. May be necessary; first determine whether previous scribe marks exist to aid in aligning the case when assembling. If so, no other scribe marks needed.
3. Should be stacked alternately.
4. Tire squeal on turns; oversteering tendency.
5. Do. Because this isolates the backlash if in transmission also.
6. Hold ring gear; turn axle. Axle should revolve firmly. If too loose, add shims; if too tight, remove shims.
7. True.
8. True.
9. False, this lubricant may contain ingredients harmful to Positraction clutch plates.
10. True.

Service Man's Idea Book

Transatlantic Merchandising

A British automobile manufacturing firm has worked out a plan that calls for the customer to fly from the United States to England in a chartered plane, take delivery of his new sports car, and then continue on a three weeks' tour of England and the Continent.

Says Alan Bethell, president of Standard-Triumph: "The plan has received such an outstanding reception that we were forced to turn down many people this year."

Selling Brake Service

Gene Elliot of Hickory Motor Sales (Hickory, N. C.) sends along this award-winning contribution to Service Man's Idea Book. "When an owner is having his car serviced in our shop, we ask to adjust his hand brakes. As this is a very small job, we let him sit in the car and check them after they are adjusted.

"While in the car he is asked how the brake pedal feels. Many times the owner says they are down and lets us adjust them also. Other times we find the brakes worn out or a leaking cylinder. He generally lets us repair them too. In short, we help the customer to sell himself."

Help the Customer to Decide

At a recent Chicago forum on distribution and advertising, James Moran, president of Courtesy Motor Sales, made several excellent points on new car selling. "Every person that opens our front door represents a very substantial investment. These people came because somewhere in their mind was the thought of buying a new automobile. . . . Our secret is helping the customer to *decide* what he wants.

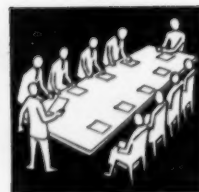
"That sounds pretty simple. But believe me it's a mighty big order because we are firmly convinced that most people don't really know what they want." Mr. Moran adds that a good salesman can help a customer buy the right car at the right price and drive out ready to do repeat business with your firm.

"What makes a good salesman?" he asks further. "It doesn't necessarily mean a crew-cut or a college education or any of those things. It means helping the customer decide; helping him decide that your place is a good place for him to do business; helping him decide that the deal you're giving him is saving him money . . . that you are able to give him the right kind of service he wants."



Trenton, N. J. radio station WBUD is using wheel disks for promotion purposes. Disks are said to be eye-catchers as they do not revolve when wheels do. Disks are made by Auto Ad Disk Co. of Trenton.

MANAGEMENT CLINIC



Listen while you sell

Lending an attentive ear to the customer can pay dividends

THE salesman who keeps his ears in good repair and listens to customers is already one jump ahead of most of his competitors.

Listening to what a customer specifies and then striving to supply it may seem too simple a prescription for helping to correct a sales slump. It is such a "little thing" that it is just taken for granted. But checking up to see if your salesmen are doing so can pay surprising dividends.

May Look Elsewhere

Keep in mind that to a customer who orders definite qualities, colors, sizes and styles, these specifications are not "unimportant little details." They are the potent test of whether he can trust a salesman to get him what he wants. If not, the customer will look elsewhere in all probability.

If a salesman gives the impression that such a customer is too fussy or demanding, he stands a good chance of losing both the order and future business from one who may have a very profitable customer.

That is why the smart salesman makes quite a production of carefully taking notes about what any customer requests. Then seriously assures him: "I'll take this up and follow through on the order myself." The goodwill of the customer will not likely be lost even though the customer does not get exactly what he specified. This because the customer has been left with the feeling:

"They tried to get me what I wanted. They were doing their best."

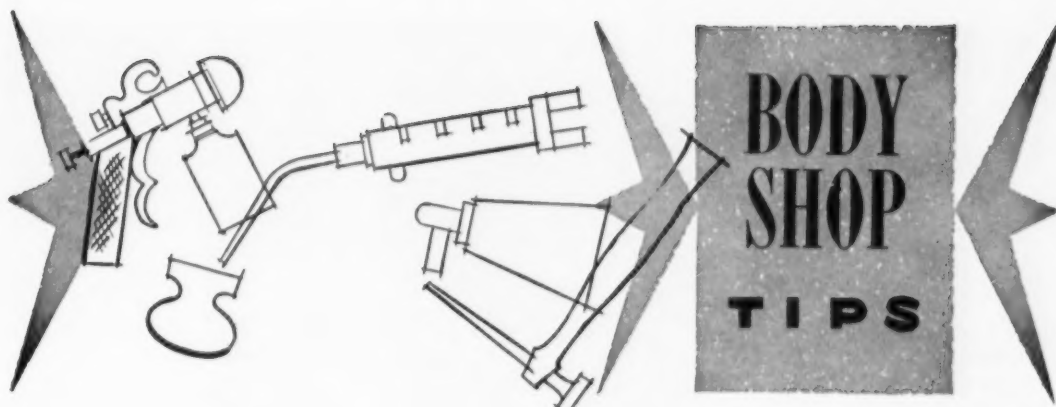
Once Henry Longfellow said, "Most persons would succeed in small things if they were not troubled with great ambitions." The one who troubles to listen to the particulars of what a customer specifies is all too rare.

One successful auto salesman who continues to sell cars to his clientele on a repeat basis, even though the salesman himself has changed dealerships more than one time, has this rule:

"I listen to whatever a customer specifies and as soon as such a car arrives, I call up to tell him. Because the car will be the right model in the right color with the right type of tires, he often buys. That's how I keep ahead of the others working here. Even if I switched jobs, I would still follow the same method of suiting the customer. It is only by suiting customers that you keep goodwill and build up a following in any type of sales work."

Inattention Hurts

Inattentive sales people in all fields of merchandising keep insisting on pushing items that customers obviously don't need or want. They waste their own time and effort, and the time and patience of prospects. Emphasize to your salesmen the need of helping the customer decide what he needs and can afford.



BODY SHOP TIPS are worth

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

Paste Wax Seals Windshield Leaks

When minor windshield leaks seem to be a big job to seal, I have found an easy solution. I take a can of paste car wax and work the wax up into the rubber around the windshield glass. Work the wax into the crevice between the rubber and body also. Wipe off the excess wax and the job is neatly done. *James Blaser, Siegel Garage, Cudahy, Wisconsin.*

Tool For Caulking Out Rocker Panels

A special tool shaped from a truck spring leaf, 1/4-inch thick

and 1 3/4 inches wide, is a time-saver for caulking out rocker panels and other body jobs. Remove the scuff (step plate), cut a slot in the metal in the top of the rocker panel under scuff plate. Then insert the tool and hammer on it to caulk the dents out in the rocker panel. Since the tool has a number of shapes, it is versatile enough to be used to pound out the kinks on the bot-



tom of front fenders, by hammering on the tool's hump. You can also push the tool behind a fender groove and use it as a dolly to hammer against. *Harry J. Miller, 991 42nd St., Sarasota, Florida.*

Chain From Car To Ground Reduces Static Electricity

I find when painting with enamel paint that I can eliminate more than half the paint dust simply by laying a chain

across the bumper to the floor. By so doing, the static electricity which attracts this dust is reduced. This helps to make a much cleaner looking paint job. *Ralph Thonell, A & T Body Shop, Highway 57, Washington, Ind.*

Easy Way To Remove Inside Door Handles

I have found an easy way to remove inside door handles and window winders. This can be done by using a spark plug gage with wire ends and a screw driver. Push in on plate behind handle with screw driver. Hook wire spring clip with end of gage and pull gently so you will not lose clip when it pops out. Handle will then slip off. *Herbert C. Helm, 1416 St. Louis Ave., Vandalia, Ill.*



MOTOR AGE TROPHY is being presented by Editor Frank Tighe to driver, Paul Russo, right. Russo posted the fastest qualifying lap at the Indianapolis Speedway this year. Gold watches were also awarded to Russo, his mechanic, Gene Marcenac, and the car's owner Lew Welch.



NewsScene



MODERN ICE CREAM PARLOR on wheels is seen in the Polar Cub Mobile Unit with its eye-catching appearance and efficient way of dispensing ice cream to youngsters.



PROF CYCLES AHEAD. Prof. Leslie A. Jones of Brown University is seen using a motorcycle to get from the scene of one ceremony to another part of the campus for awarding diplomas.



UP PERISCOPE. Two pointers peer from "portholes" installed in the cover of the car's trunk to get air and light when owner went driving.

PETITE SOUTHERN BEAUTY, below, points to the fender insignia used by Chevrolet to designate their fuel injection engine.



Engineering Highlights



by Joseph Geschelin
Engineering Editor

WHAT'S the pitch on automobile horns?

Buick's pitch is made up of the musical notes F and A, but the selection is a matter of choice by individual car manufacturers, according to R. S. Thornburgh, who heads Buick's electrical division.

Thornburgh explained that Buick changed the tonal qualities of its horns for 1957 for several reasons. "We had used E flat and G for several years," Thornburgh said, "but decided to advance the tone one full pitch in 1957.

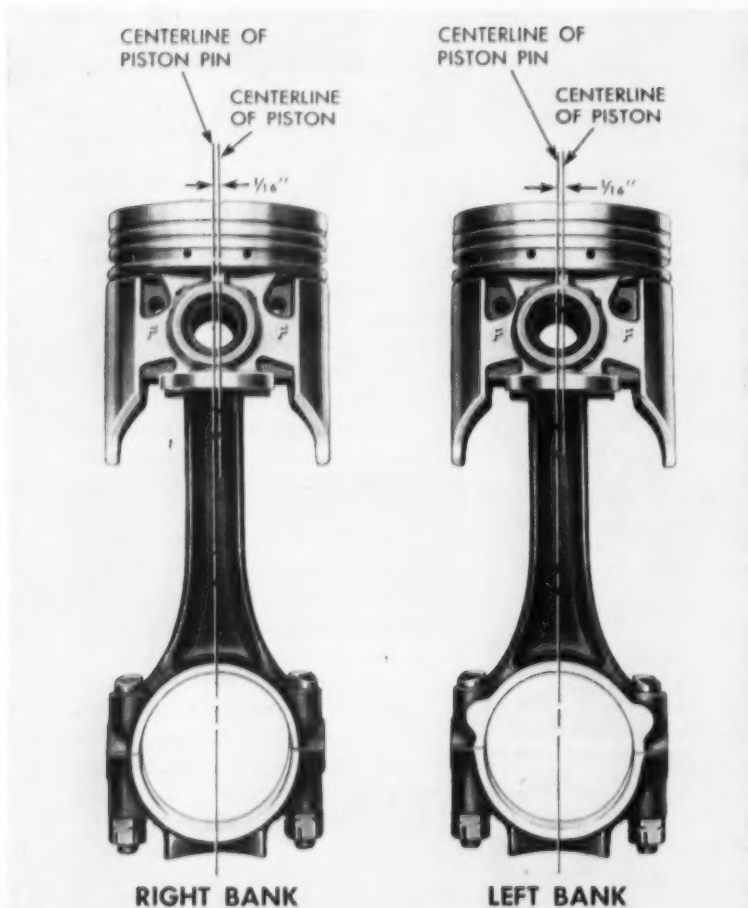
The problem of horns is becoming of increasing importance. "The answer is not more horns," said Thornburgh. "Tests show that increasing the number of musical notes does not add to the audibility of the horns' sound.

"Our old tone combination of E flat and G operated at 311 and 390 cycles per second, respectively. By changing to F and A, at 350 and 440 cycles per second, we think we have arrived at the immediate answer while still remaining within the bounds of permissible intensity."



**READERS'
CLEARING
HOUSE**

TROUBLE SHOOTING



Advice Needed on Assembling Pistons and Rods

I am about to do a ring job on a 1955 Pontiac V-8. Can you tell me how the pistons and rods

are assembled to the crankshaft? What I mean are they marked front and rear, etc?

*Car Conditioning
Phila., Penna.*

BEFORE taking any engine apart make sure pistons are numbered and the caps are marked so as to make sure they go back in their original position. All Pontiac pistons have an "F" cast on the front side and a notch in the top of the piston head at the front. The pistons should always be installed with the notch toward the front of the engine. Pistons are also numbered. The odd numbered pistons belong in the left bank and the even numbered in the right bank. Looking at the connecting rods you will find that one side of the rod will have large machined bosses on the cap and rod. The rods are correctly assembled to the crankshaft when these bosses on two adjacent rods face each other. Also the oil groove between the rod and cap will be on the left side on even number rods and on the right side on odd number rods.

Having Trouble Shifting From 2nd Gear to High

One of my customers has a 1951 Nash Ambassador. He is having trouble shifting gears. Every time he uses 2nd gear it will stick in gear and is hard to

FOR ADDITIONAL SERVICE INFORMATION REFER TO CHILTON'S

PROBLEMS



By Jack Montgomery
Technical Editor



shift back into high. I changed the grease and checked the linkage, but it did not seem to help any.

*R. H. Erny & Company
Phila., Penna.*

USUALLY, when this condition develops it is either due to a faulty synchronizer or excessive end-play in the main shaft. I have seen cases where the rear bearing lock ring broke and caused the main shaft to slide back and forth. Replacing the lock ring and new synchronizer shoes fixed the trouble.

Adjusting 1956 Ford Automatic Transmission

I am writing in hopes that you will be able to settle a disagreement on the correct procedure for adjusting the automatic transmission of a '56 Ford. There has been a lot of arguments over this point among the men in the shop and we would like to have it settled.

*C. J. Cetto
E. Palestine, Ohio*

I PRESUME you mean band adjustments not linkage adjustments. To adjust the bands, two special torque wrenches

should be used. One to read in inch pounds, the other in ft. lbs. Adjust front band: Drain transmission and remove the oil pan. Insert a 1/4 inch gauge block between the front servo piston's stem and the band actuating lever. Loosen the adjusting screw locknut and tighten the screw to 10 in. lbs. Back off and retighten, if necessary to be certain that the screw is as near to being exactly 10 in. lbs. as is possible. Back the adjusting screw off exactly one turn and tighten the lock nut to 20-25 ft. lbs. Remove the gauge block. Rear Band: Raise floor mat on right side, take off cover plate. Loosen the lock nut and tighten the adjusting screw to exactly 10 ft. lbs. Back off and retighten to come as near as possible to 10 ft. lbs. Back off the screw exactly 1 1/2 turns. Tighten the lock nut to 35-40 lbs.

A 1949 Chevy Cuts Out Between 30 and 40 mph

We have a '49 Chevy which tends to cut out between speeds of 30 to 40 miles an hour. We have put new points and plugs in it and have also reset the timing. We thought that perhaps

the distributor cap was cracked but that checked out OK. We then put a new wire on from the coil to the distributor cap. But it still cuts out. At high speeds it runs very well.

*David Peterson
Rock Garden Service
Dell Rapids, South Dakota*

I HAVE seen cases like yours from the spark plug gaps being set too close. Make sure they are set at .040 inch, and also check the ignition coil. If you are satisfied with the ignition, then check the carburetor. I would suggest resetting the float level and adjusting the metering rods. If the car has considerable mileage on it, I would recommend a rebuilt or new carburetor.



MANUAL MOTOR AGE FLAT RATE AND SERVICE

1957 Tune-up—Alignment Specifications

MAKE AND MODEL	ENGINE		TUNE-UP DATA										FRONT END ALIGNMENT			
	No. of Cylinders Bore and Stroke (In.)	H.P.	Spark Plug Make and Size (mm)	VALVES				IGNITION				King Pin Inclination (Deg.)	Caster (Deg.)	Cambar (Deg.)	Toe-In (In.)	
				Seat Angle		Operating Tappet Clearance		Breaker Point Gap (In.)	Cam Angle (Deg.)	Spark Plug Gap (In.)	Timing Spark Occurs T. C.					
				Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)									
AMERICAN MOTORS CORP.																
Hudson	8-35780	8-4x3 1/2	255	CA-14	30	45	Hyd	Hyd	.016	30	.035	5B	8 1/2	0 to 1/2 P	1/2 N to 1/2 P	1/2 to 1/2
Metropolitan	4-561, 562	4-2 1/2 x 3 1/2	52	Ch-14	45	45	.015HC	.015HC	.015	30	.024	11B	8 1/2	2P to 3P	1/2 P to 1 1/2 P	0 to 1/2
Nash	8-5780	8-4x3 1/2	255	CA-14	30	45	Hyd	Hyd	.016	30	.035	5B	8 1/2	0 to 1/2 P	1/2 N to 1/2 P	1/2 to 1/2
Rambler	8-5710	6-3 1/2 x 4 1/2	125	CA-14	45	45	.012H	.016H	.016	32	.035	TC	6 11'	0 to 1/2 P	1/2 N to 1/2 P	1/2 to 1/2
	8-5720	8-3 1/2 x 3 1/2	190	CA-14	30	45	.012H	.014H	.016	30	.035	5B	6 11'	0 to 1/2 P	1/2 N to 1/2 P	1/2 to 1/2
	8-5730	8-4x3 1/2	255	CA-14	30	45	.012H	.014H	.016	30	.035	5B	6 11'	0 to 1/2 P	1/2 N to 1/2 P	1/2 to 1/2
CHRYSLER CORP.																
Chrysler	8-C-75-1	8-3 1/2 x 3 1/2	285	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-C-75-2	8-3 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
	8-C-76	8-4x3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	38	.035	6B	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
	8-C-76-300	8-4x3 1/2	375	AL-14	45	45	.015H	.024H	.017	38	.035	4B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
De Soto	8-5-27	8-3 1/2 x 3 1/2	245	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-5-25	8-3 1/2 x 3 1/2	270	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-5-26	8-3 1/2 x 3 1/2	295	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-5-26 Adventurer	8-3 1/2 x 3 1/2	345	AL-14	45	45	Hyd	Hyd	.017	38	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
Dodge	8-D-71, D-72	8-3 1/2 x 4 1/2	138	AL-14	45	45	.010H	.010H	.020	39	.035	TC	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-D-66, D-67-1	8-3 1/2 x 3 1/2	245	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	D-70, D-71	8-3 1/2 x 3 1/2	260	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-D-67-2	8-3 1/2 x 3 1/2	280	AL-14	45	45	.015H	.024H	.017	38	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-D-508-1	8-3 1/2 x 3 1/2	340	AL-14	45	45	.015H	.024H	.017	38	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
Imperial	8-IM1	8-4x3 1/2	325	AL-14	45	45	Hyd	Hyd	.017	31	.035	6B	6 1/2	0 to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
Plymouth	8-P-30	8-3 1/2 x 4 1/2	132	AL-14	45	45	.010H	.010H	.020	39	.035	TC	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-P-31-1	8-3 1/2 x 3 1/2	197	AL-14	45	45	.008H	.018H	.017	31	.035	4B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-P-31-2, P-31-3	8-3 1/2 x 3 1/2	215	AL-14	45	45	.008H	.018H	.017	31	.035	4B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
	8-P-31 Fury	8-3 1/2 x 3 1/2	390	AL-14	45	45	.008H	.018H	.017	38	.035	6B	6 1/2	0 to 1 1/2 N	0 to 1 1/2 P	1/2 to 1/2
FORD MOTOR CO.																
Continental	8-60A	8-4x3 1/2	300	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	5B	7 1/2	1/2 P to 1 1/2 P	0 to 1/2 P	1/2 to 1/2
Ford	8-57A, B; 58A, B; 73A, B	8-3 1/2 x 3 1/2	144	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	4B	7 1/2	1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
	8-73A, B	8-3 1/2 x 3 1/2	190	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	7 1/2	1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
	8-57A, B; 58A, B	8-3 1/2 x 3 1/2	206	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	7 1/2	1/2 P to 1 1/2 P	0 to 1 1/2 P	1/2 to 1/2
	8-40A, B	8-3 1/2 x 3 1/2	212	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	7 1/2	1/2 P to 1 1/2 P	1/2 P to 1 1/2 P	1/2 to 1/2
Lincoln	8-57A, B; 58A, B; 60A, B; 76B	8-4x3 1/2	300	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	5B	7 1/2 14'	0 to 1/2 N	0 to 1/2 P	1/2 to 1/2
Mercury	8-57A, B; 58A, B	8-3 1/2 x 3 1/2	255	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	7	0 to 1 1/2 N	0 to 1/2 P	1/2 to 1/2
	8-75A	8-4x3 1/2	290	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	7	0 to 1 1/2 N	0 to 1/2 P	1/2 to 1/2
GENERAL MOTORS CORP.																
Buick	8-40	8-4 1/2 x 3 1/2	350	AC-14	45	45	Hyd	Hyd	.015	21	.033	5B	7 3/2 1/2	1 1/2 N	1/2 P	1/2 to 1/2
	8-50, 60, 70	8-4 1/2 x 3 1/2	300	AC-14	45	45	Hyd	Hyd	.015	21	.033	5B	7 3/2 1/2	1 1/2 N	1/2 P	1/2 to 1/2
Cadillac	8-60, 62, 75	8-4x3 1/2	300P	AC-14	45	44	Hyd	Hyd	.019	31	.035	5B	4	1/2 N to 1 1/2 N	1/2 N to 1 1/2 P	1/2 to 1/2
Chevrolet	6-1500, 2100, 2400	6-3 1/2 x 3 1/2	140	AC-14	31	46	Hyd	Hyd	.019	32	.036	TC	4	1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2
	8-1500, 2100, 2400	8-3 1/2 x 3	162	AC-14	45	45	Hyd	Hyd	.019	30	.036	4B	4	1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2
	8-1500, 2100, 2400	8-3 1/2 x 3	185	AC-14	45	45	Hyd	Hyd	.019	30	.036	4B	4	1/2 P to 1 1/2 P	0 to 1P	1/2 to 1/2
	8-2934	8-3 1/2 x 3	220	AC-14	45	45	Hyd	Hyd	.018	29	.036	4B	4	0 to 1P	0 to 1P	0 to 1/2
Oldsmobile	8-55, Super 55, 98	8-4x3 1/2	277	AC-14	45	45	Hyd	Hyd	.016	30	.030	5B	7	0 to 1/2 P	1/2 N to 1 1/2 P	1/2 to 1/2
Pontiac	8-57-27 Chief, 98	8-3 1/2 x 3 1/2	227	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	1 1/2	1/2 N to 1 1/2 N	0 to 1P	0 to 1/2
	8-57-27 Super Chief, Star Chief; 57-28	8-3 1/2 x 3 1/2	244	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	1 1/2	1/2 N to 1 1/2 N	0 to 1P	0 to 1/2
STUDEBAKER-PACKARD CORP.																
Packard	8-57L	8-3 1/2 x 3 1/2	275	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2
Studebaker	8-57G	6-3x4 1/2	181	Ch-14	45	45	.016C	.016C	.020	39	.031	2B	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2
	8-57H	8-3 1/2 x 3 1/2	210	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2
	8-57H	8-3 1/2 x 3 1/2	244	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2
	8-57H Golden Hawk	8-3 1/2 x 3 1/2	275	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1N to 2 1/2 N	0 to 1P	1/2 to 1/2

ABBREVIATIONS
 1—Left only; right, 1/2 N to 1/2 P.
 2—Eldorado models, 325.
 AC—A. C. Spark Plug Div.

AL—Electric Auto-Lite Co.
 B—Before top center.
 C—Cold.
 CA—Champion or Auto-Lite.

Ch—Champion Spark Plug Co.
 H—Hot.
 HC—Hot or cold.
 Hyd—Hydraulic valve lifters.

N—Negative.
 P—Positive.
 TC—Top center.

MOTOR AGE

Recommends

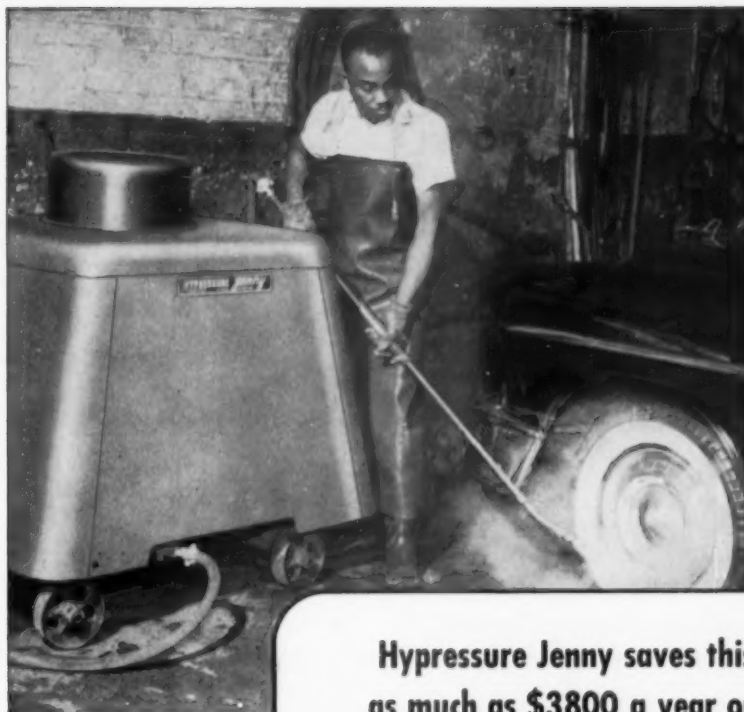


GIVE YOUR CAR A BRAKE

For safety's sake, have your Automotive Serviceman give a thorough check-up to your car's brake system. **DO IT TODAY.** Unlike the fellow above, you'll not need to explain why "My brakes just didn't hold."

1957 New Passenger Car Registrations by Makes by States*

STATE AND MONTH	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Ford	Hudson	Lincoln	Mercury	Metro-politan	Nash	Oldsmobile	Packard	Plymouth	Pontiac	Rambler	Studebaker	All Others	Total
Alabama	April 638	115	2501	155	109	287	2170	5	32	437	8	13	534	7	725	471	74	42	202	8,812
4 Mos. 2139	400	7769	454	272	806	7438	17	110	1214	26	42	1594	17	2073	1350	218	169	412	28,539	
Arizona	April 180	96	741	50	38	83	811	1	25	170	11	2	164	203	163	64	34	145	2,975	
4 Mos. 736	295	2674	214	123	272	3091	5	81	532	35	20	706	7	736	520	168	143	359	10,716	
Arkansas	April 165	57	873	49	32	157	901	1	13	109	4	4	177	277	134	25	22	24	3,124	
4 Mos. 1156	278	4646	198	175	717	5333	10	99	961	6	18	1123	8	1513	1006	140	185	89	17,681	
California	April 2550	1544	10139	1107	857	1537	12792	44	801	2790	213	85	2763	36	2969	2516	575	410	4192	48,120
4 Mos. 12217	8020	40530	8028	3320	7642	49993	227	1970	10378	824	300	3005	164	15793	10808	2276	1779	14271	195,492	
Colorado	April 346	82	1073	129	76	225	1193	15	33	276	14	15	299	12	575	229	45	112	4,332	
4 Mos. 1345	407	4296	471	261	996	4572	53	124	922	38	69	1119	40	2055	907	372	213	309	18,493	
Connecticut	April 605	225	1829	278	166	479	1956	4	83	357	27	22	580	10	1074	572	219	105	436	9,034
4 Mos. 2626	707	5432	808	631	1400	6017	29	227	959	81	91	1801	35	2950	1787	603	316	1125	26,934	
Delaware	April 99	40	380	35	38	70	446	1	6	85	1	1	101	1	203	101	4	12	36	1,659
4 Mos. 562	139	1847	162	117	257	1731	4	55	318	2	7	143	3	851	496	40	82	90	6,934	
Dist. of Columbia	April 169	55	664	74	56	117	537	4	25	144	5	2	443	4	268	206	32	20	91	2,714
4 Mos. 567	321	2876	262	173	418	1682	13	70	371	13	6	814	11	990	581	94	52	300	8,749	
Florida	April 1195	586	4224	369	283	646	4215	24	195	780	40	17	1029	15	1719	732	212	113	1177	17,544
4 Mos. 4725	2416	16626	1358	888	2721	15556	108	796	2747	168	76	4359	58	6189	2781	995	450	3687	65,780	
Georgia	April 347	100	1904	76	60	207	1742	3	33	232	9	7	326	11	503	461	48	71	107	6,245
4 Mos. 2432	629	10519	550	344	1248	10750	8	151	1403	54	54	2287	25	2887	2226	228	299	494	36,577	
Idaho	April 157	52	338	27	23	93	371	4	15	95	3	2	130	1	176	117	51	21	46	1,721
4 Mos. 605	167	1304	142	116	317	1237	20	58	301	8	12	450	5	527	424	188	96	118	6,062	
Illinois	April 3543	1116	8515	1059	758	1435	9259	29	336	1259	16	108	3099	40	4013	2490	716	430	591	40,201
4 Mos. 12520	4555	34701	4080	2685	5274	34658	130	1217	6656	56	487	11716	193	14955	90537	2498	1716	2212	149,332	
Indiana	April 1507	351	3558	371	342	681	3854	18	92	804	7	48	1099	20	1547	1002	165	338	179	10,101
4 Mos. 4634	1241	11539	1244	1132	2233	13096	60	336	2567	25	151	3956	89	5117	3143	554	1207	489	53,613	
Iowa	April 612	184	2128	184	111	352	2086	21	34	376	1	19	637	7	875	447	129	85	78	8,246
4 Mos. 2273	526	7277	599	449	1201	7355	44	135	1452	5	70	2044	35	2727	1576	390	338	290	28,786	
Kansas	April 714	195	2550	206	172	421	2496	12	40	482	9	17	674	19	942	563	128	111	91	9,848
4 Mos. 2096	637	6978	833	472	1039	7023	42	151	1370	21	69	2032	40	2530	1548	354	234	235	27,372	
Kentucky	April 566	104	1856	106	102	311	1872	7	18	754	2	6	433	7	673	381	38	46	37	6,763
4 Mos. 1934	324	5452	413	326	724	3546	26	74	1067	8	24	1646	24	2068	1200	124	135	49	8,118	
Louisiana	April 476	133	2504	155	102	273	2238	3	44	386	6	5	837	4	787	568	33	55	91	8,400
4 Mos. 2034	584	9780	537	427	1051	9191	9	194	1478	22	28	2323	23	3001	2188	126	239	263	33,436	
Maine	April 175	41	562	30	34	96	524	6	14	89	9	6	131	4	240	120	84	26	130	2,223
4 Mos. 527	132	1625	19	121	302	1642	19	42	263	24	24	438	8	728	448	254	116	267	7,079	
Maryland	April 509	157	2402	204	171	528	2403	18	38	401	11	8	560	20	1397	594	79	94	218	9,992
4 Mos. 2205	551	7973	844	643	1794	8261	46	155	1427	59	52	2154	59	4759	2139	295	348	661	34,458	
Massachusetts	April 1055	339	3323	440	360	722	3546	17	103	754	29	29	1317	15	1630	901	484	125	704	18,211
4 Mos. 3881	1206	9912	1361	1122	2132	11260	94	362	2244	83	130	4257	44	5357	2922	1331	346	1542	49,818	
Michigan	April 291	659	6726	773	721	1906	8716	24	196	1923	42	31	1804	14	3936	1762	537	212	707	33,180
4 Mos. 9302	4148	25847	3035	2885	6397	32082	91	898	7117	141	168	8334	71	14069	6727	1728	788	1856	125,692	
Minnesota	April 1913	234	2810	322	241	906	3164	13	72	621	10	37	988	18	1372	768	238	195	123	12,622
4 Mos. 3464	805	9398	895	767	1797	10707	48	265	2135	18	162	3466	42	4124	2356	692	617	388	42,148	
Mississippi	April 247	60	1142	66	52	159	1131	1	17	164	1	2	241	4	436	240	13	38	39	4,062
4 Mos. 1228	271	4704	237	198	807	4396	3	67	674	3	11	1054	14	1468	934	58	168	121	16,111	
Missouri	April 595	245	3637	280	271	546	3359	9	53	434	3	22	846	16	1706	736	133	145	148	13,616
4 Mos. 3489	1021	13899	930	866	1915	13127	31	228	2152	23	99	3353	54	5672	2675	482	599	511	51,296	
Montana	April 143	53	492	40	25	101	439	2	16	100	5	3	132	2	172	95	25	23	23	2,003
4 Mos. 583	180	1566	197	116	367	1590	22	43	355	18	29	535	13	628	334	199	99	233	7,108	
Nebraska	April 239	60	852	60	39	102	985	6	18	173	7	7	291	7	285	179	45	33	27	3,419
4 Mos. 1226	275	3725	275	183	430	3811	20	72	735	33	943	22	1169	741	171	168	85	14,054		
Nevada	April 46	25	156	15	20	20	148	1	11	47	1	1	51	1	67	59	4	16	42	731
4 Mos. 213	191	637	83	60	97	714	3	54	190	5	1	248	8	225	250	16	77	223	3,210	
New Hampshire	April 144	37	967	92	48	124	523	3	15	119	7	6	149	5	262	163	94	32	149	2,463
4 Mos. 390	112	1310	110	124	262	1223	7	42	289	14	17	345	2	587	388	186	77	295	7,759	
New Jersey	April 1332	625	4551	841	647	1324	4673	25	174	950	20	31	1342	36	2761	1156	290	236	510	21,494
4 Mos. 5576	2377	16103	3156	2471	4548	16615	81	696	3487	74	114	4678	154	9613	4296	832	944	1609	77,424	
New Mexico	April 68	29	392	40	25	65	343	1	12	64	4	10	405	2	87	101	13	10	40	1,389
4 Mos. 368	108	1501	121	82	201	1204	4	38	224	4	10	405	2	87	101	13	10	40	1,389	
New York	April 4134	1509	10499	2130	1446	3214	11831	56	454	2583	81	99	3769	71	6035	3206	809	554	1770	84,513
4 Mos. 17395	8192	32663	6937	4825	9695	36227	196	1558	8298	244	321	12671	204	19783	9614	2319	1678	5538	171,940	
North Carolina	April 536	164	2050	197	139	293	2197	3	44	304	20	13	612	5	727	486	73	48	62	7,986
4 Mos. 2511	642	6182	689	514	1094	9645	19	184	1313	52	67	2237	31	2893	1693	786	322	318	32,826	
North Dakota	April 101	22	458	49	31	100	495	7	85	1	9	124	1	168	67	28	35	29	1,823	
4 Mos. 456	112	1893	178	131	380	1961	10	41	329	1	38	504	11	586	285	114	88	58	7,176	
Ohio	April 2665	785	7158	897	749	2036	8286	45	213	1910	38	68	2184	41	3941	2086	377	285	385	34,050
4 Mos. 11043	3238	27601	3733	3093	7750	32795	173	893	6682	135	205	9344	171	14859	8125	1282	1213	1532	134,127	
Oklahoma	April 354	130	1514	91	94	191	1731	6	26	318	8	8	462	7	566	362	71	44	80	6,033
4 Mos. 1418	465	5240	360	352	660	5963	18	100	1011	13	30	1521	23	1936	1079	186	68	247	20,675	
Oregon	April 304	104	1777	102	114	207	1326	8	44	297	16	1								



Hypressure Jenny saves this Indianapolis Agency as much as \$3800 a year on used car cleaning...



States
Mr. Garland L. Johnson
Service Manager
Superior Chevrolet, Inc.
Indianapolis, Ind.

"We pride ourselves on selling the cleanest used cars in Indianapolis. It is a strict rule that every used car we handle must be thoroughly cleaned as well as lubricated, have the oil changed and the front wheels packed.

If we were to clean the cars in the standard way, it would take us 1½ hours, or possibly more. This would tie up our service operation because of the bottleneck of men waiting to work on the cars.

With HYPRESSURE JENNY it takes only 30 minutes to do the complete cleaning job including motor and chassis. This saving of one hour or 66% time and labor

means that there is a saving of about \$4.00 for each hour because of the expensive bottleneck we eliminate. Selling about 950 used cars a year brings the total savings to as much as \$3800.00 per year.

In addition, we use HYPRESSURE JENNY to clean parts and customers' cars before certain repair jobs. On this I couldn't begin to total the savings."

The above statement by Mr. Johnson proves that HYPRESSURE JENNY not only more than pays for itself the first few months it is in operation, but that it is without doubt the most profitable time and money-saving shop tool you can add to your service equipment.

For the full story of how you can put HYPRESSURE JENNY to work saving and earning for you...
MAIL THE COUPON TODAY!
You'll be glad you did.

HYPRESSURE

Jenny

**STEAM
CLEANER**

*Mail this
coupon TODAY...*

Without obligation send me full particulars on:

☐ Hypressure JENNY.

☐ Jobber time-payment plan.

Name _____ Title _____

Company _____

Address _____

City _____ State _____

HYPRESSURE JENNY DIVISION

HOMESTEAD VALVE MANUFACTURING COMPANY

P.O. BOX 95

"Serving Since 1892"

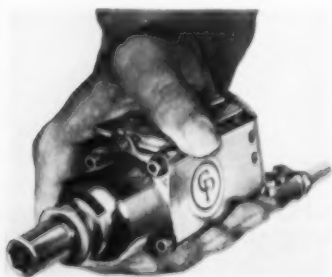
CORAOPOLIS, PA.

INVEST IN THE BEST

TOOLS AND EQUIPMENT

201. Midget Air-Wrench

Chicago Pneumatic Tool Company: A new air wrench is now being marketed. One-hand reversing is obtained by a throttle located on top of the wrench. It is said that the throttle pivots on the tool centerline so that pressure on the right or left side gives forward or reverse operation. No change of grip or switch flipping is said to be necessary. According to the company, power rating of the wrench can be varied, and is controlled by a regulator. Impact action is developed by the power converter that changes air motor power into a series of rotary impact blows. An attachable angel head clamps rigidly to the tool nose, permitting one-hand operation in close-quarter location.



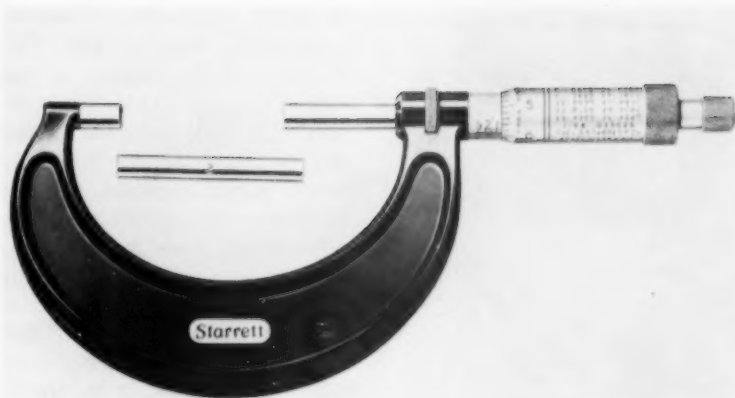
▲ 202. New Rectifier

Exide Automotive Division: A new fast charger which incorporates a new device, the Silicon rectifier has been introduced by the manufacturer. It is said that the rectifiers are a departure from the types heretofore used in fast chargers. Two Silicon units measuring one inch by one inch, less the pigtail lead, are used in a new Exide charger which, the company states, is capable of charging 6-volt batteries at 110 amperes and 12-volt batteries at 70 amperes. They are being offered as regular equipment in the deluxe fast charger model.

203. Analysis Machine

National Cash Register Co.: This new machine is used in connection with office and shop accounting systems. Row of buttons at right side of machine allow for 19 categories. Machine also is used for analysis of salesmen's commissions. Another job the machine is said to do is an analysis of wages paid to employees on the payroll. Machine and its functions is described in detail in article "A New Approach to Automotive Accounting" that begins on page 37 of this issue.





206. Micrometer Caliper

Starrett Company: Designed for automotive work, the outside micrometer calipers are suited, it is said, for crankshaft measuring. They handle most crankshaft diameters since the micrometer has a 3 inch frame with a range from $7\frac{7}{8}$ to $27\frac{7}{8}$ inches. Reading point is on the underside of the thimble. Anvil and spindle lengths are designed for crankshaft measurements. They are graduated in thousandths of an inch and are furnished with ratchet stop, lock nut and standard.

204. Car Washer

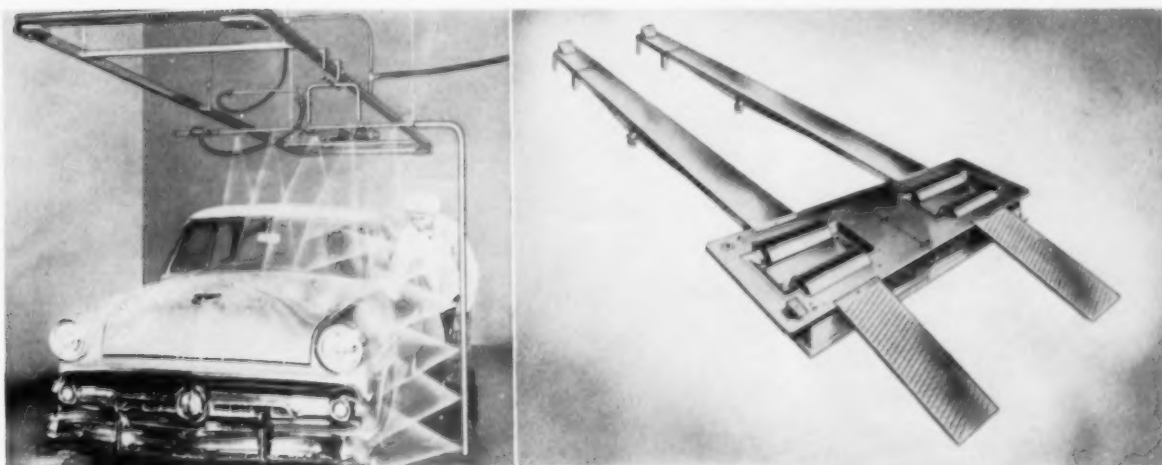
Wohlert Corporation: A new type car washer is being offered, which can use as low as 16 lbs. water pressure for sufficient spray pattern with this unit. According to the company the spray moves around the car automatically. There are three speeds that can be used. It is said that the spray of water is so controlled that it does not impede the work of the operation. The company claims that three complete trips around the vehicle is all that is needed for a complete wash job. It can be installed indoor or outdoors.

205. Service Jacks

Weaver Manufacturing Company: New service jacks of $1\frac{1}{4}$ and $1\frac{1}{2}$ ton capacity have just been introduced. According to the manufacturer, model WA-66 of $1\frac{1}{4}$ ton capacity and model WA-67 of $1\frac{1}{2}$ ton capacity are similar in design. These jacks, it is said, are equipped with 2 piece removable handle, large non-slip saddle, large front wheels and ball bearing swivel casters. It is stated that both jacks have a low of $37\frac{7}{8}$ inches and the model WA-66 raises to $18\frac{1}{4}$ inches while the WA-67 raises to 20 inches.

207. Indoor Road Testing

Bear Manufacturing Co.: A new way of in-the-shop testing has been developed. Known as the Autorol, it can be used, it is said, by driving the rear wheels of a vehicle on four free-rolling traction rolls. Service troubles in the power train may be duplicated at actual road speeds inside the shop. The Autorol makes it possible to duplicate the driving speed at which the customer first noticed his need for service. According to the company, it is available in three models, rack type, floor and recessed. ▼



INVEST IN THE BEST

TOOLS AND EQUIPMENT

208. Generator Tester

Electro Products Company: The Electro Model 300 generator tester is said to be capable of testing car and light truck generators at full rated output, with or without their respective regulators. The electric motor supplied with this tester is a 2 hp. 220 volt AC high torque motor. It incorporates, it is said, an automatic reset thermal protective device.

209. Small Compressor

Garner-Denver Company: A small compressor that is said to supply oil-free air for the operation of instrument controls, paint spraying, etc., is now available. It is said that the carbon parts in cylinder require no oil or water lubrication. The CACB model is a single stage, air-cooled unit, available base or tank mounted.



210. Speed-Midget Set

H. K. Porter, Inc.: Known as the P-F 11 Speed-Midget Set, this set is said to make body and fender repair easier and quicker. According to the manufacturer, P-F Ez-E-On Tubing will eliminate screwing and unscrewing threaded tubing. It is said that the four-ton power of the P-F Super Speed Jack will give a full inch of ram travel for 6½ strokes. The set is said to include an adjustable spoon, a spreader, pulladapter, pullchains and clamps. The set contains 36 pieces in all. ▼

211. Portable Cleaner

Malsbary Manufacturing Co.: To improve portability, it has been announced that the company's tricycle-mounted Model 250 HPC cleaners and Model 110 steam vapor cleaners will be equipped with brackets for coiled steam hose and rack for holding cleaning gun. It is said that the brackets eliminate dragging hose and 16 x 4 inch tires make it easy to take steam cleaning wherever it is needed in the shop or yard.

212. Line Oiler

The DeVilbiss Company: According to the manufacturer, incorporation of an air tool control unit in the feed line of any air tool other than a spray gun will help reduce maintenance cost. It is said that this "line oiler" unit cleans, regulates and oils the air supply to many types of pneumatic equipment. The unit is said to consist of a condenser to remove water scale and rust from the air, a regulator to maintain pressure, and a lubricator to add the proper amount of oil to air stream. ▼





213. Rod Reconditioning

Sunnen Products Company: The manufacturer states that whenever new inserts are used, rods should be reconditioned to assure exact fit with proper "crush" controlled oil flow, equalized load distribution and uniform heat transfer. It is claimed that the company's reconditioning method restores rod bore to original standard size. According to the company, parting faces of the rod and cap are first ground on its Cap and Rod Grinder. After this operation, rods are then honed.



214. Brake Analyzer

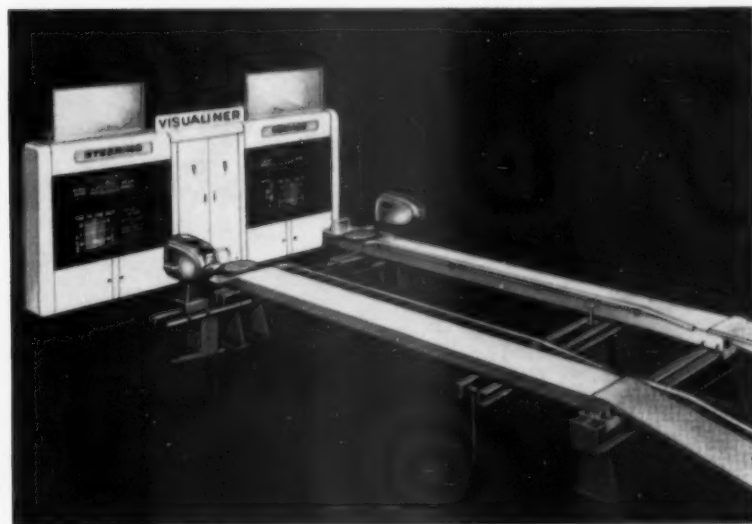
Bendix Products Div., Bendix Aviation Corp.: The Bendix Power Brake Analyzer is now being marketed. According to the manufacturer, it is a specially designed test bench complete with hydraulic-vacuum test panel. It is said that each analyzer is equipped with an electrically driven vacuum pump and reservoir for testing all sizes and models of hydrovacs, treadle-vacs, power-vacs, power cylinders and control valves as well as other vacuum power units.

215. Brake Shoe Grinder

Ammco Tools, Inc.: Known as the "Safe-Arc" brake shoe grinder, this grinder is available with an attachment to allow grinding of shoes for adjustable anchor brakes against a fixed anchor. According to the company, this feature assures that the shoes are ground exactly the same. The company claims that the "Safe-Arc" will handle shoes for cars with fixed top anchors or with adjustable anchors. The operator can, it is stated, cam grind to exact arc of the drum as required.

216. Alining Equipment

John Bean Division Food Machinery and Chemical Corp.: According to the manufacturer, the adjustable visualiner gives easy on-the-rack mobility. It is stated that the adjustable runway eliminates jacking and jockeying of cars into position for wheel alinement. The runways and car can be moved as a single unit. The car can be driven onto the rack and then position the rear of the car in alinement with the front, parallel to the light beams. It is said that other features of the visualiner are: roller bearing mounted rear wheel jack assembly; pointer for one man wheel base check.



INVEST IN THE BEST

TOOLS AND EQUIPMENT

▼ 217.

Dual Purpose Hoist

Globe Hoist Company: According to the manufacturer, a combination hoist and transporting dolly has been engineered for lifting and servicing the Volkswagen. It is stated that the car may be lifted on the hoist for servicing and lubrication or the transporting dolly may be placed below the car when hoist is in raised position, permitting the mechanic to lower car on the dolly. Model V-7 Hoist is equipped, it is said, with wheel strips for car spotting, a non-rotating device and rubber padded contacting arms. A track is furnished for guiding the transporting dolly into position, it is stated. According to the manufacturer, the unit is shipped semi-assembled with complete instructions for installation. It should be recessed to provide adequate clearance.

► 218. Power Flusher

Choldun Mfg. Corporation: According to the manufacturer an all-automatic "Power Flusher" is now being marketed. It is claimed that it will save time and give maximum, uniform results in the power-purging of radiators and motor blocks in the same operation. According to the company, the flushing cycle and venting is automatically timed and controlled. The company claims that an average purging job is completed in approximately 30 minutes, automatically, without removing the radiator from the engine block.

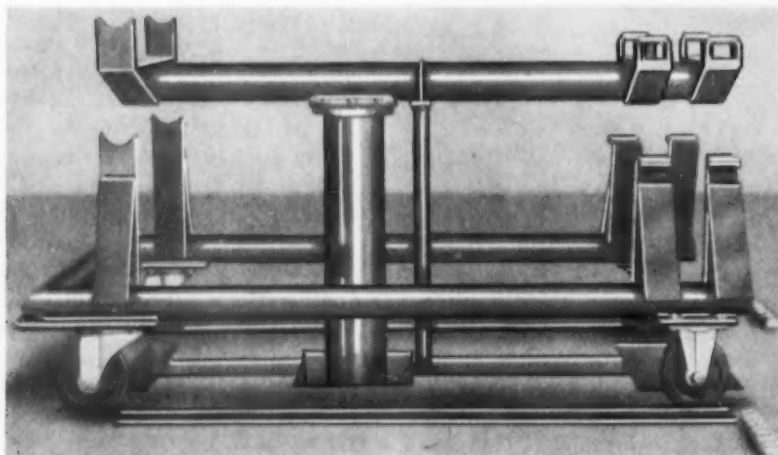


219. Alining Reamers

Albertson & Company, Inc.: Valve stem guide reamers for late model engines with integral guides are now being marketed. According to the company these reamers are for reaming worn guide holes to install valve with oversize stems. It is said that they are designed with a close fitting pilot end and full length alinement which prevents reaming out of true. The reaming is done at the lead end of the blades; the length of blades, it is said, cannot cut and will provide true alinement.

▼ 220. New Nibbler

The Black & Decker Mfg. Co.: A new nibbler has been recently added to the manufacturer's line of products. The Nibbler is said to be built for all types of sheet metal. According to the company it punches out small, rectangular pieces and operates on a punch and die principle, delivering 3300 strokes per minute. The company claims that it cannot be overloaded and will operate without vibration or distortion. It is powered by a Black & Decker-built engine. The tool has sealed ball bearings throughout. The punch is reversible, the company states. The No. 16 Nibbler weighs 5½ lbs.



USE THESE

Free & Easy

INQUIRY CARDS

How to use the Inquiry Card

EACH month Motor Age's New Products Show Window describes dozens of fast-moving items and money and time saving equipment from the country's leading manufacturers of dependable automotive products.

This month instead of the usual practice of your writing direct to the manufacturer, you may use either or both of the postcards on this page. Simply mark a circle around the same number on the postcard as it appears with the new product description.

New Literature

221. Drop Light Catalog

Cordomatic, Div. of Vacuum Cleaner Corp. of America: A 16-page, color catalog has been released. It is said to describe the company's line of automatically controlled retracting cord reels. The catalog gives complete descriptions and specifications of the entire line, including it is claimed, several new products introduced for the first time.

222. Booklet On Motors

General Electric Company: A 16-page color booklet has been introduced, illustrating designs and components in integrated insulation systems of fractional horsepower mo-

Postcard valid for 90 days only

7/57

Frank P. Tighe, EDITOR MOTOR AGE

P.O. Box 102, Village Station, N. Y. 14, N. Y.

Please send me further information on the New Products, the code numbers of which I have circled below.

- | | | |
|--------------------------|----------------------------|----------------------------|
| 201. Midget Air-Wrench | 214. Power Brake Analyzer | 227. Locking Type |
| 202. New Rectifier | 215. Brake Shoe Grinder | 228. Differential |
| 203. Analysis Machine | 216. Aligning Equipment | 229. Band Adjustment Tools |
| 204. Car Washer | 217. Dual Purpose Moist | 230. Brake Drum Lathe |
| 205. Service Jacks | 218. Power Flasher | 231. Pressure Cup |
| 206. Micrometer Caliper | 219. Aligning Reamers | 232. Coil and Condenser |
| 207. Indoor Road Testing | 220. New Nibbler | 233. Valve Refacer |
| 208. Generator Tester | 221. Drop Light Catalog | 234. Portable Power Tools |
| 209. Small Compressor | 222. Booklet On Motors | 235. Fuel Pressure |
| 210. Speed-Midget Set | 223. Fan Belt Literature | 236. Regulators |
| 211. Portable Cleaner | 224. Brass Fitting Catalog | 237. Distributor Tester |
| 212. Line Oiler | 225. Muffler Sales Folder | 238. Chuck Gage |
| 213. Red Reconditioning | 226. Lubricating Book | |

Your Name Your Title

Your Company

Your Business: Wholesaler Repair Shop Car Dealer

Address (City) (State)

Postcard valid for 90 days only

7/57

Frank P. Tighe, EDITOR MOTOR AGE

P.O. Box 102, Village Station, N. Y. 14, N. Y.

Please send me further information on the New Products, the code numbers of which I have circled below.

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Your Name Your Title

Your Company

Your Business: Wholesaler Repair Shop Car Dealer

Address (City) (State)

New Products

Continued from page 69

tors. It is said that they are used in the equipment manufacturing field on such applications as power tools, heating and ventilation equipment, compressors, fans, water pumps and machine tools.

223. Fan Belt Literature

Automotive Replacement Div. of Thermoid Co.: An assortment of fan belt merchandising aids is being offered. According to the company, the promotional material stresses the fact that a bad belt can start troubles, ranging from poor starting to a burned out engine. Assortment includes a 48 x 18 duck-line banner; and 18 x 25 indoor poster; a set of six posters; 50 envelope stuffers; three fan belt inspector's badges; and a descriptive catalog sheet.

224. Brass Fitting Catalog

The Weatherhead Company: Publication of a 48-page brass tube fitting catalog has been announced. The catalog is said to list all sizes and types of brass fittings including the company's drain and shut-off cocks. Other subjects covered, it is said, are push-pull controls, assembly instructions on brass fittings, data on right and wrong way for tubing a system, tube fitting data and tools.

225. Muffler Sales Folder

Merit Muffler and Pipes: A new sales aids folder has been introduced. According to the manufacturer they are printed in blue and black on white and the folder illustrates in color 30 stocking, installation and merchandising aids. It is said that the folder is 8½ x 11 inches in size and punched to fit any binder.

226. Lubricating Equipment Book

The Aro Equipment Corp.: A revised 52-page catalog covering automotive lubricating equipment is now available. It is said that the catalog pinpoints data on chassis service, air and water service and miscellaneous ranging through accessories and specialized equipment. The catalog is said also to include two pages of technical installation data.

(Continued on page 118)

BUSINESS REPLY CARD

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

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Village Station,

New York 14, N. Y.

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FIRST CLASS
PERMIT No. 36
Sec. 349, P. L. & R.
New York, N. Y.

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Village Station,

New York 14, N. Y.

Readers Service Dept.

FIRST CLASS
PERMIT No. 36
Sec. 349, P. L. & R.
New York, N. Y.

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of June 24, 1957.
State or local taxes, transportation and finance charges and optional equipment are extra.

BODY MAKE AND MODEL	List Price at Factory without Federal Taxes				Shipping Weight	FEDERAL TAXES AND HANDLING CHARGES	Delivered Price at Factory including Federal Taxes				Shipping Weight	FEDERAL TAXES AND HANDLING CHARGES	Delivered Price at Factory including Federal Taxes				Shipping Weight
	List Price at Factory without Federal Taxes	Federal Tax	Handling Charge	Delivered Price at Factory including Federal Taxes			Federal Tax	Handling Charge	Delivered Price at Factory including Federal Taxes	Federal Tax			Handling Charge	Delivered Price at Factory including Federal Taxes			
AMERICAN MOTORS CORP.																	
HUDSON Super Sedan, 4d Hollywood, 2d Custom Sedan, 4d Hollywood, 2d	2820 2694 2687 2781	230 236 243 249	2750 2640 2940 3030	3631 3655 3678 3693													
METROPOLITA N*																	
Hardtop Convertible	1406 1428	121 123	1527 1551	1825 1795													
NASH																	
Amb. Super Sedan, 4d Ctry. Club, 2d Amb. Cust. Sedan, 4d Ctry. Club, 2d	2820 2604 2687 2781	230 236 243 249	2750 2640 2940 3030	3639 3655 3701 3722													
RAMBLER																	
DeLuxe 6 Sedan, 4d Super 8 Sedan, 4d Sed. Hdt., 4d Sta. Wagon, 4d Custom 6 Sedan, 4d Sta. Wagon, 4d Super 8 Sedan, 4d Hard Top, 4d Sta. Wagon, 4d Hdt. Sta. Wag. 4d	1757 1890 1969 2158 1874 2242 2011 2279 2095 2363 2442	163 175 181 194 181 200 184 203 190 209 205	1920 2065 2190 2352 2155 2442 2195 2482 2285 2572 2657	2911 2914 2936 3042 2936 3076 3223 3359 3259 3392 3409													
CHRYSLER CORP.																	
CHRYSLER																	
Winch Sedan, 4d Hardtop, 2d Hardtop, 4d Twn. & Ctry. Saratoga Sedan, 4d Hardtop, 2d Hardtop, 4d New Yorker Sedan, 4d Hardtop, 2d Hardtop, 4d Conv. Coupe Twn. & Ctry. Hardtop, 2d Conv. Coupe	2811 2871 2931 3264 3392 3426 3498 3809 3836 3889 4242 4342 4513 4913	222 227 231 256 266 274 299 301 305 331 339 351 381	3033 3098 3162 3520 3658 3694 3772 4108 4137 4194 4573 4681 4864 5294	3995 3925 4030 4210 4165 4210 4195 4315 4220 4330 4365 4490 4235 4390													
FORD MOTOR CO.																	
CONTINENTAL																	
Hardtop	6938	682	6620	4797													
FORD*																	
Custom V8 Bus. Tudor Tuxer Fordor Cust. 300 V8 Tudor Fairlane Club Sedan, 2d Town Sedan, 4d Victoria, 2d Victoria, 4d Fries 500 V8 Club Sedan, 2d Town Sedan, 4d Victoria, 2d Victoria, 4d Sunliner Sta. Wags. V8 Ranch Del Rio Ctry. Sed., 6p Ctry. Sed., 4p Ctry. Squire Thunderbird-8 Convertible	1807 1911 1958 2289 2065 2181 2138 2185 2191 2252 2181 2226 2234 2295 2398 2199 2298 2339 2437 2556 3068 3158																
LINCOLN																	
Capri Coupe Sedan, 4d Hardtop, 4d Premier Coupe Sedan, 4d Hardtop Sedan, 2d Sedan, 4d Phaeton, 2d Phaeton, 4d Convertible Montclair Sedan, 4d Phaeton, 2d Phaeton, 4d Convertible Tngk. Cruis. Sedan, 4d Conv. Cruis. Sedan, 2d Sedan, 4d Phaeton, 2d Phaeton, 4d Montclair Sta. Wagon Comm., 2d, 6p Comm., 4d, 9p Voyager, 2d, 6p Voyager, 4d, 9p Col. Pk., 4d, 9p	4203 4339 4339 4686 4804 4804 358 35																

**\$
25**

**FOR THE KINK
OF THE MONTH**

TIME AND WORK SAVING IDEAS ON CARS AND

SHOP KINKS

TRUCKS CAN PAY OFF. SEND YOURS IN NOW!

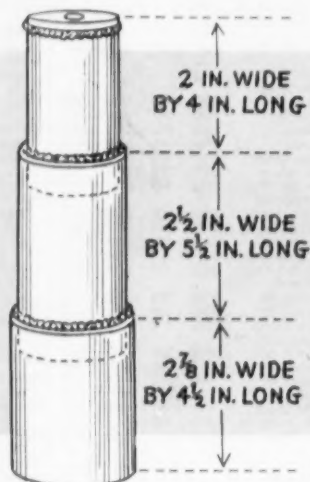
**\$
7.50**

**FOR EACH
KINK PAID**

\$25

KINK OF THE MONTH

Tool for Installing
Hydra-Matic Rear Oil Seal



Take three galvanized pipes of different dimensions and lengths and weld them together. Weld in a 2 inch washer on the smallest pipe. Sometimes it is a hard job to drive the seal in with a hammer because you can't get to it and also you will damage the seal. But with this tool you have easy access to the seal coming through the frame from the rear of the transmission and no damage will be done to the seal. *Melvin L. Sutter, Hauptli Pontiac Company, 923 North Morgan St., Downs, Kan.*

Grinder and Wire Brush End Help Find Bad Axle Bearing

In our shop we find that by using a heavy duty bench grinder, wire brush end, we can locate for sure a bad axle bearing, sealed type. When a customer comes in for a noise suspected of being a bad axle bearing, it usually is just starting to get noisy. This is the most difficult thing to find. Feeling for a rough bearing by hand can be misleading, so we take the shaft and bearing to the grinder. Then we hold the bearing against the wire brush end, hard enough to spin the bearing up as fast as possible. If it's bad, you'll know it right away. It will sing or vibrate distinctly. *Harlan H. Otto, Service Manager, Obermeyer Olds, Inc., 334 E. Michigan, Ypsilanti, Michigan.*

Remove Sediment Bowl Before Disconnecting the Fuel Line

When doing work on cars that require disconnecting the fuel line at carburetor or discharge side of the fuel pump, I simply remove the fuel pump sediment bowl so the gas doesn't run all over when the motor is being turned. This requires no extra work as the sediment bowl should be cleaned on every motor overhaul or tune-up. This is especially important when work-

(Continued on page 74)

When a customer's car has that
"Ball and
Chain"
feeling...

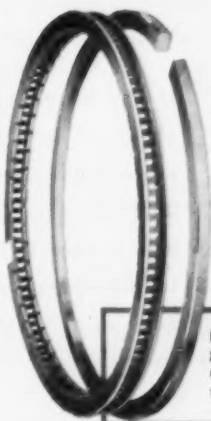


restore that
New Car Feel and Longer Engine Life with

Sluggish engines come alive with full power and alert response when your overhaul jobs include Perfect Circle 2-in-1 Chrome piston rings.

Perfect Circle 2-in-1 Chrome sets *more than double* the life of cylinders, pistons and rings because BOTH the top compression ring and the oil ring are plated with thick, wear-resisting solid chrome. PC piston rings seat faster, too, because they are lapped in at the factory.

For longer life, sustained power and lasting oil economy install PC 2-in-1 Chrome sets and be sure of satisfied customers—real insurance against comebacks! Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., 888 Don Mills Road, Don Mills, Ontario.



PERFECT CIRCLE

2-IN-1 CHROME PISTON RINGS

*double the life of
cylinders, pistons and rings*

DON'T MISS YOUR DOCTOR OF MOTORS CLINIC!

Sponsored by your PC Jobber, the Doctor of Motors Clinic is packed with facts of great value to you. Plan to attend the next one.

Shop Kinks Continued from Page 72

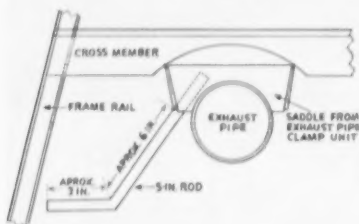
ing under a car so you will not get gas in your face or on your clothing. *Wayne Petrie, 26 South Street, Clark Mills, New York.*

Headlight Trouble Traced To Headlight Socket

When you have headlight trouble it is often found in the back of the sealed beam headlight socket where the light bulb goes into the socket. By baring the wire back and putting a metal screw in it, it fits and holds the wire tightly. *Schultz Brothers, 28 Pyatt Street, Youngstown, Ohio.*

Handy Tool For Supporting Exhaust Pipe

Here is a handy tool for supporting exhaust pipe while sawing off the original muffler. Weld rod to saddle of exhaust pipe clamp. To use tool, insert between exhaust pipe and cut-out



section in cross member. Push up slightly on muffler, holding tool in place. Then saw off exhaust pipe. The tool will remain in place until removed. *James E. Shaver, Weisinger Chevrolet Co., 502 Frazier St., Conroe, Tex.*

Emergency Gas Tank Repair

I have found a way for stopping gas tank leaks without removing tank or fuel. Select a

washer that will completely cover the hole. Place the rubber side next to the tank. Screw the sheet metal screw through the washer before placing it in position for repairing the leak. *C. J. Connell, Wilkerson Garage, Greenwood, La.*

How To Find Blown Fuses

Here's an easy way to tell which fuse has blown in case of trouble in your shop's wiring circuits. Number each outlet to correspond with the number of the fuse or circuit breakers controlling it. Then in case of

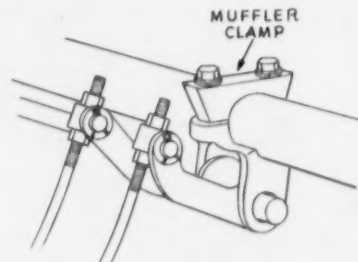


trouble, one glance will tell you where it is. *L. E. Johnston, 815 Lawrence St., Madison 5, Wisc.*

Use Muffler Clamp To Repair Shift Linkage

We have a lot of trouble where

the upper support holds the lower controls on the standard shift model 1957 Plymouth. This piece is made of pewter and breaks very easily. As a replace-



ment, we buy a tail pipe U clamp that fits 2 inch connections and cut off a 1/4 inch section. This works out just fine and can be bought almost anywhere. *J. A. Holubec, Box 1073, Taylor, Tex.*

Replacing Oversize Rocker Arm Studs

We have found in replacing oversize rocker arm studs in all V-8 Chevrolet motors it is best to freeze the stud and it will drop in the hole very easily. After this process, crank the engine and warm it up and then replace the rocker arm. The best thing to freeze the stud with is a CO₂ Fire Extinguisher. This whole process takes about 3 minutes. *W. A. Heath, Harvey Motor Company, Kinston, N. C.*

If you have an original idea for a special tool, a short cut on a job or any trick of value to others, write it down and if necessary make a rough sketch. Just make it clear. Send it to Motor Age. If your Kink is used it may bring you \$7.50 or \$25. All entries become the property of the Chilton Company. Because of the quantity of entries sent in, none can be returned.

WHEN YOU NEED A TOOL...

'PHONE YOUR *New Britain* JOBBER!

REMEMBER! any Tool you ever need is no further away than a 'phone call to your NAPA Jobber! Ample stocks of the basic New Britain Tools you use every day — Sockets, Drive Parts, Wrenches and Pliers, *PLUS* scores of other specialized Tools for Body Work, Ignition, Valve, Piston and all engine repairs are ready for YOU. And, when you call your New Britain Jobber for *any* Tool, you can be dead certain you'll get the best. For, New Britain Tools are designed *by* mechanics *for* mechanics to make your job easier and faster.

Check YOUR Tool Kit right now, just pick up the 'phone and call your Jobber . . . get that New Britain Tool you've been needing and intending to buy. It will make money for you.



Here are the famous New Britain Automatic Transmission Tools that have opened up big profits in automatic transmission service —

NEW FORDOMATIC SERVICE TOOL BOARDS

All the Tools you need for FORDOMATIC External and Internal service and repairs. Ask your Jobber about this money-making set-up, *PLUS* Tools for Hydra-Matic and other transmissions!



FAMOUS *New Britain* SETS

Good Tool Sets in the hands of good Mechanics — that's a New Britain tradition! There are many to choose from, as big and diversified as your needs demand. They cost very little on easy, pay-as-you-profit payment plans. Ask your Jobber.



SOCKETS



RATCHETS



DRIVE PARTS



EXTENSIONS



New Britain HAND TOOLS

THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN.

The first application of book-keeping machines to the automobile accounting problem consisted in *applying a mechanical device to handwritten records*. In other words, multi-column journals were still used, the basic difference being that they were posted by machine instead

of by hand, and that other forms (for instance, an accounts receivable statement and ledger card) could sometimes be printed at the same time.

This was a real step forward, because it meant a great improvement in accuracy and the elimination of a certain amount

of duplicate effort. Many dealers use this system today, with modifications of one kind and another. However, it has its drawbacks, the chief of them being that not enough time is saved. Wide journals still take a lot of time to post, even with a machine. And the equipment required to do a thorough job under the "copy the hand system" approach is relatively expensive. To be sure, cheaper posting equipment, without such features as a typewriter, is available, but it will not do a full job.

Equipment placed on the market very recently has made possible a new approach to automotive accounting. The system we use is a system that I understand will be recommended from now on by The National Cash Register Company. Many agencies will standardize on the same method. It embraces the use of two accounting machines, the cost of which, added together, is less than that of a regular typewriter-bookkeeping machine.

As mentioned, sales and cost analysis is the big automotive problem. This is done on one special kind of machine. Posting the accounts receivable, accounts payable, payroll and general ledger records, is no problem. Such posting can be, and is, done on a small typewriter - bookkeeping machine. By separating the "wheat" from the "chaff," marvelous results are obtained.

Let's take all the analysis jobs first, and see how they are mechanized. They are: counter parts sales, parts sales, internal charges, and salesmen's commissions (this last being a comparatively minor task).

Repair Orders (Service Sales)

The job of breaking out sales and cost of sales is done on a "Small Analysis Machine," a

(Continued on page 78)

He pays your bills—so treat him right!



ALWAYS USE GENUINE BENDIX STARTER DRIVES



A service business won't last long unless a good percentage of first-time customers becomes repeat customers. What makes them repeat customers? That's easy: satisfaction with the job you do for them. That's why it always pays to use only genuine parts in your repair work. Never is this more true than when servicing Bendix* Starter Drives. Always use genuine factory-new Bendix Drives and parts and you'll always send your customer away happy. He'll be back, too, because his car's performance will mark you as the man to see for *all* his service needs. First in its field for fifty years, the Bendix Drive has proved its right to be called the best many times over. Make sure your distributor always gives you *genuine, factory-new* Bendix Starter Drives.

*REG. U.S. PAT. OFF.

Bendix • Elmira, N.Y.

ECIPSE MACHINE DIVISION



Cursed by costly comebacks?



Install pre-seated Krome-Oil

Pre-seated Krome-Oil Piston Ring Sets break in fast. They deliver the immediate oil control your customer expects, eliminate costly comebacks, maintain your shop's reputation.

And Krome-Oil is a full chrome ring set—top groove chrome compression ring, chrome on the side rails of the steel oil ring. Meets all manufacturers' "specs" best for

the more than 27,000,000 cars sold since 1951 for which they recommend chrome replacement rings. Many of these cars are in your area—ready, or near-ready, for ring jobs.

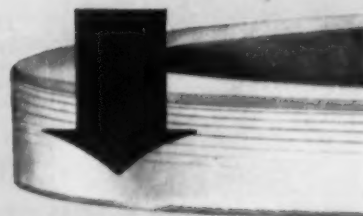
Don't forget Krome-Oil's All-in-one Envelope. Holds the rings for one piston in order of installation. No mix-ups, misplaced parts. Saves time.

AMERICAN HAMMERED

AUTOMOTIVE REPLACEMENT DIVISION • 2001 Sanford St., Muskegon, Mich.

Manufacturers of American Hammered Automotive Replacement Piston Rings

A Division of Sealed Power Corporation



This is pre-seating

Pre-seating is a factory-applied lapping process equivalent to many hundreds of miles of actual engine operation. Krome-Oil breaks in fast, delivers instant oil control. No costly comebacks.



P-F SPEED-MIDGET PF-10

® "START-A" SET

Here are the 20 most used pieces of Body Repair Equipment now in use in America's busiest Body Shops: 4 Ton Remote-Control Jack with the EXCLUSIVE EZ-E-ON Tubing and Attachments that will handle most of your Body Repair Jobs — all for the low price of \$66.00. It's your first step toward lower costs and higher profits.



GROWS to THIS ...

P-F SPEED-MIDGET PF-11

® "PUSH-N-PULL" SET

This 36 piece set adds the Adjustable Spoon, Pull Kit, Spreader, Pull Adapter, plus other attachments and tube extensions. Now you can do all Body and Fender Repairs on any part of the car, because NO OTHER EQUIPMENT CAN MATCH THE POWER and SPEED of the SPEED-MIDGET "PUSH-N-PULL" SET.

... AS YOUR BODY REPAIR BUSINESS GROWS!

Get your copy of the P-F "7 STEP FOLDER" NOW! It tells you how the P-F "STEP-BY-STEP" Purchase Plan lets you purchase new equipment out of new business or increased earnings. This plan makes it so easy to own your own equipment or modernize your shop.

ASK YOUR
P-F JOBBER

... OR WRITE

**P-F Automotive Division of
H. K. PORTER, INC.
Somerville 43, Mass.**

Accounting . . .

Continued from Page 76

new product of National Cash Register. The equipment is easy to understand. It consists basically of 18 adding machines in one. To add into any given total, you simply set the amount up on the adding machine keyboard, and touch the proper button. These buttons may be used for any breakdown required; they are labeled easily by laying alongside them a "strip" showing the various designations. The totals we use for repair orders (service sales) are as follows:

- (2) Sales Tax
- (3) Repair Labor
- (4) Paint and Body Labor
- (5) Retail Parts
- (6) Wholesale Parts
- (7) Other Parts
- (8) Accessories
- (9) Miscellaneous Supplies
- (12) Oil and Gas
- (13) Cost of Repair Labor
- (14) Cost of Paint and Body Labor
- (15) Cost of Retail Parts
- (16) Cost of Wholesale Parts
- (17) Cost of Other Parts
- (18) Cost of Accessories
- (19) Incentive

Reading directly from the repair orders, the bookkeeper enters each item into the proper button (see Figure 1). As each item is entered, it not only adds into the proper total selected by the button touched, but also into "dials" at the top of the machine. When all sales amounts and tax have been recorded, the total in the dials must equal the total on the repair order. The cost figures are then entered and the dials cleared with a "Total" button.

This operation of classifying sales and costs is done at very high speed. It is just like running an adding machine, except that instead of depressing a motor bar, the proper button is

(Continued on page 80)



WINNING MECHANIC George Salih and driver Sam Hanks admire B & D Valve Shop.



RAY NICKELS, QUALIFYING WINNER with B & D's E. J. Bernau and Jay Redmon.

"500" winning, qualifying mechanics awarded Black & Decker Valve Shops!



TRAVERSE GRIND at any angle. 0° to 90° valve angle adjustments.



COMPLETE VALVE SHOP ON WHEELS INCLUDES: adjustable lamp—wet grinding valve refacer—stone dressing stand—full assortment of Vibro-Centric Stones, stone sleeves, pilots in large fitted drawer—plenty of storage space.

GRIND SEATS to mirror finish without complicated adjustments.

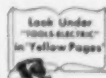
SENSITIVE MICROMETER FEED for valve stem, rocker arm grinding.



Praise precision features of B&D POWER-BUILT equipment

Readying "500 milers" for that gruelling grind requires the best engine maintenance equipment! That's why George Salih and Ray Nickels go for their new Black & Decker complete valve shops, awarded them by Black & Decker. They like the way this great tool produces an absolutely smooth surface and true angle on valve faces; provides perfect accuracy and mirror finish to all types of valve seats, hard or soft. And, it turns out perfectly matched, gas-tight valve jobs quickly—an important factor to these men!

See for yourself how this complete Valve Shop can increase *your* profits. Call your Black & Decker distributor for a free demonstration. Or write: THE BLACK & DECKER MFG. Co., Dept. 5107, Towson 4, Md. (In Canada: P.O. Box 278, Brockville, Ont.)



Leading Distributors Everywhere Sell



Black & Decker®

Quality Electric Tools—Power-built to set the pace!

touched. When all sales slips have been run through, the totals are cleared; they are posted later to distribution ledger cards on the typewriter-bookkeeping machine.

That is all there is to it! The repair orders are proved automatically as they are analyzed.

In place of the arduous, time-consuming task of writing in each item in a separate column on a journal sheet, then adding and cross-adding the columns, searching for errors, making corrections, and so on — we touch a button, and prove as we go.



keep America on the move

Check the caps every time you lift the hood.
Build good will by anticipating trouble for
your customers. Save them time and money on
their vacations. Order needed Stant **EVRSAL** Pressure
Caps, **DUAL-LOC** Locking Gas Caps and
EVRSAL Oil Filler Caps.

Write for catalog to
STANT MANUFACTURING CO., INC.,
Connersville, Indiana.

... naming your jobber.

used on America's Finest Automobiles as
Standard Equipment for a generation



PARTS SALES: This is our keyboard setup for parts sales:

- (2) Sales Tax
- (3) Trim Labor
- (4) Trim Parts
- (5) Retail Counter Parts
- (6) Wholesale Discount Parts
- (7) Wholesale Other Parts
- (8) Accessories
- (9) Federal Tax
- (12) Postage
- (13) Cost of Trim Labor
- (14) Cost of Trim Parts
- (15) Cost of Retail Counter Parts
- (16) Cost of Wholesale Discount Parts
- (17) Cost of Wholesale Other Parts
- (18) Cost of Accessories
- (19) Incentive

The parts sales slips are processed in exactly the same way as the repair orders (see illustration on Page 37). Totals are cleared and posted to distribution ledger cards.

You will notice that outside labor, cost of outside labor, direct inventory items and other miscellaneous items do not have buttons on the machine. We have very few entries to these accounts. Those that we do have are run through a "Miscellaneous" key on the machine, inserting both account number and amount. The Miscellaneous key automatically causes a slip to issue from the machine. Posting to distribution accounts is done directly from the slips themselves. In other words, after running through all parts sales slips, we might have one or two or three miscellaneous slips. The subsequent typewriter-bookkeeping machine entry to ledger cards would consist of posting the analyzed sales and cost totals, plus the miscellaneous slips.

Another Small Analysis Machine job is the analysis of salesmen's commissions. At the end of the month, we used to sort invoices by salesman. We then

(Continued on page 82)

Announcing the new **PEAK** ANTI-FREEZE

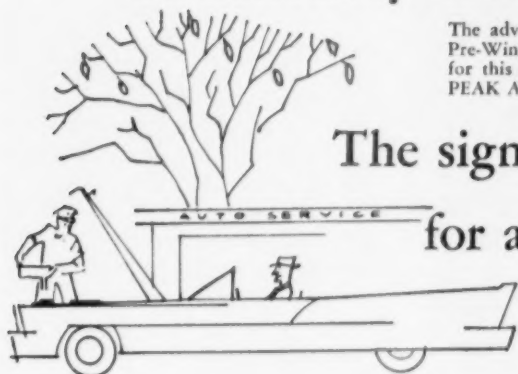
"EXPERT DEALER" PROGRAM

- It helps you sell more anti-freeze . . . earlier!
- Helps sell related winter products and service!

You put up this sign which will
be nationally advertised by PEAK!



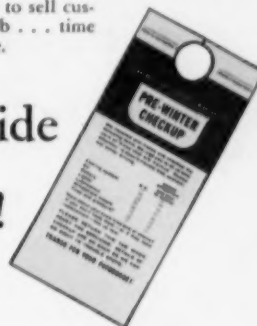
The advertising will tell car owners you offer a Pre-Winter Checkup. Motorists will be looking for this sign. They will want the service — and PEAK Anti-freeze, too.



The sign brings in car owners early
for anti-freeze and the checkup!

This helps you avoid the last-minute rush when cold weather hits. You have the time to sell customers on a complete winterizing job . . . time to make extra profits for your service.

You use this wheel tag as a guide
when making the checkup!



It takes only a few minutes to make the checkup while you are draining the radiator. Use the tag as your guide in making the checkup. There's room on the back for remarks.



The tag helps you sell related
winter products!

It tells your customer what service or parts are needed. The tag is your sales-opener. It gets the car owner interested in buying . . . leads to extra sales of tires, batteries, oil and other items.

STOCK PEAK
to tie-in with this program.
It's backed by national
and
**HOMETOWN
ADVERTISING!**



STOCK PEAK and you carry the best anti-freeze on the market!

- PEAK gives unsurpassed all-winter freeze protection.
- PEAK gives better protection from rust and corrosion than any other nationally advertised brand.
- PEAK is guaranteed.

Commercial Solvents Corporation, 260 Madison Ave., N. Y. 16, N. Y.

ST. JOSEPH 54, MO. 195

MO-KAN WALNUT COMPANY
808 S 8TH STREET
ST. JOSEPH, MO.

TERMS: NET
NO CASH DISCOUNT
ALL ACCOUNTS ARE DUE
AND PAYABLE NOT LATER
THAN THE 10TH OF MONTH
FOLLOWING DATE OF
PURCHASE.

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE

DATE	INVOICE NO.	CHARGES	CREDITS	BALANCE
BALANCE FORWARD				
OCT 20 56	13,777	11.04		47.46 58.50

At left is shown Accounts Receivable set-up. Invoices are journalized, vouchered, and distributed at the same time. Ledger card shown here is same as those used for posting cost and retail totals from Small Analysis Machine.

Accounting . . .

Continued from Page 80

listed each man's name on a spread sheet and, invoice by invoice, entered the commission amounts under the proper names.

We now assign a total on the analysis machine to each of our 13 salesmen. We run through the invoices and enter each commission amount to the proper button. Each invoice copy is validated by the machine as entries are made. This is accomplished automatically just by slipping the invoice into the machine's printer.

Note that we could validate all sales slips and repair orders in the same way; but we do not feel this is necessary. The reason we validate the invoices is that if any salesman thinks he has been underpaid, he can go to his file of invoices. Each amount due him should be validated with his number (as, "9"). If he sees a "2"—another salesman—he has the right to, and will, howl.

An analysis of wages paid is also made on the machine, twice each month. The analysis is made directly from time tickets and, in the case of salaried employees, earnings records:

- (2) Sales Commission — New Car
- (3) Sales Commission — Used Car
- (4) Sales Supervision — New Car
- (5) Sales Supervision — Used Car
- (6) Salaries — Supervision — New
- (7) Salaries — Supervision — Used

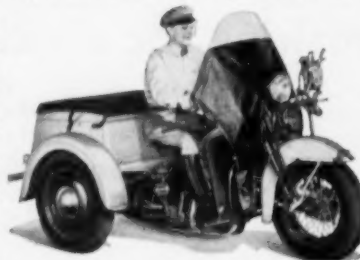
(Continued on page 86)



Busy... but not making the money you should?

Harley-Davidson Servi-Cars show the way to more efficient and profitable operation

Here's the low-cost way to keep jobs rolling . . . keep profits frequently lost in the waste motion of "jockeying cars all over the lot!" Servi-Car delivery moves finished jobs out fast — right to your customer's door. They'll show their appreciation by coming back again and again as well as by telling their friends. And your place will always have that clean, inviting appearance . . . always look ready to take on rush jobs. Ask your dealer for the FREE booklet: "It Pays to Give Service." Or write — HARLEY-DAVIDSON MOTOR CO., Dept. MA, Milwaukee 1, Wisconsin.

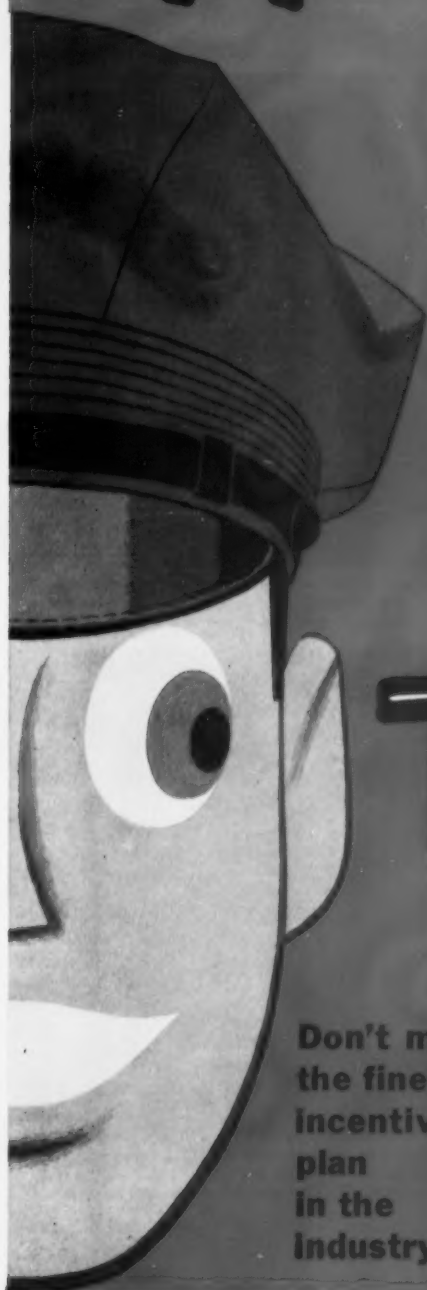


**Harley-Davidson
SERVI-CAR**



See next month's FRAM message for the

opportunity of a LIFE TIME!

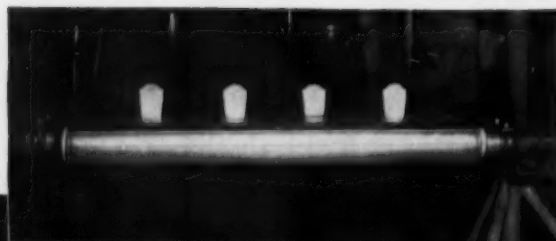


Don't miss
the finest
incentive
plan
in the
industry!

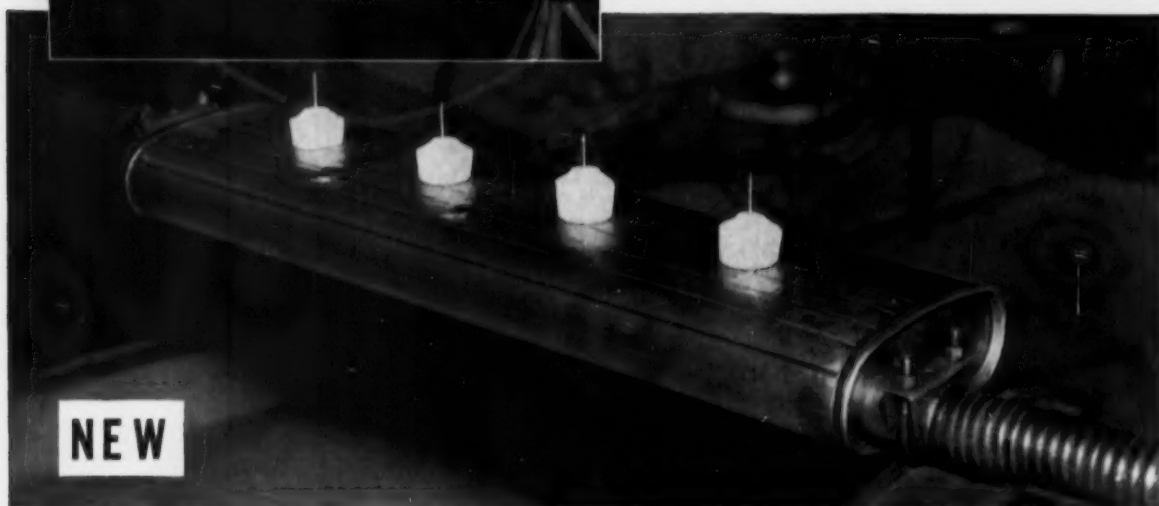
FRAM
OIL • AIR • FUEL • WATER
FILTERS

**FRAM
FILTERS
BEST**

NEW AP "DRI-FLOW" DESIGN SLOWS RUST-OUT, MAKES



In this test the new AP "Dri-Flow" model and a muffler of earlier design were installed on an engine dynamometer. Four candles were placed on each muffler, and the engine was run at a driving speed of 25 mph for a period of 10 minutes. The distribution of heat is clearly shown by the melting candles.



New AP "Dri-Flow" Design has uniform heat over its entire area, as shown by the evenly melted candles. Keeping all chambers at the same heat eliminates cold spots where excessive corrosive moisture collects. This revolutionary development, latest example of AP quality leadership, insures a much drier muffler. And with AP's heavier steels, this means an even longer-lasting muffler.

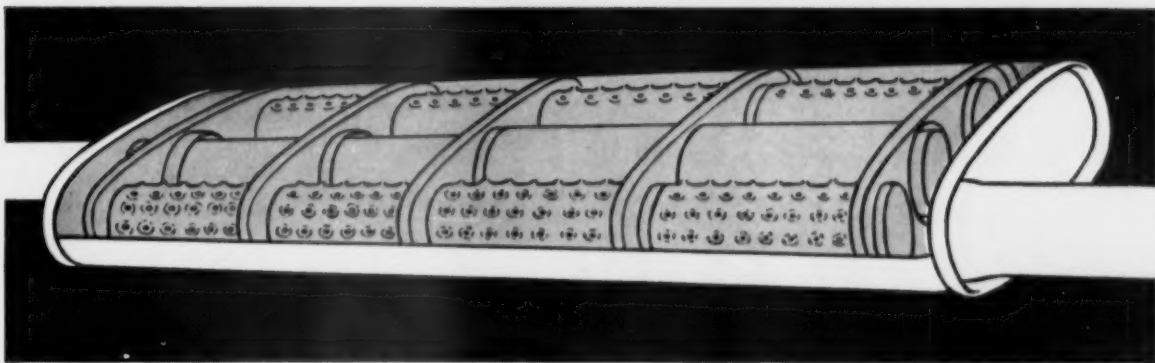


Hot-spot, cold-spot design of most mufflers, including this earlier AP model, is shown by the unevenly melted candles and the heat-darkened areas. Corrosive moisture from the exhaust fumes condenses in the cold spots, while the hot spots tend to burn out metal. This destructive combination attacks mufflers from the inside, results in short service life. The new AP design prevents this.

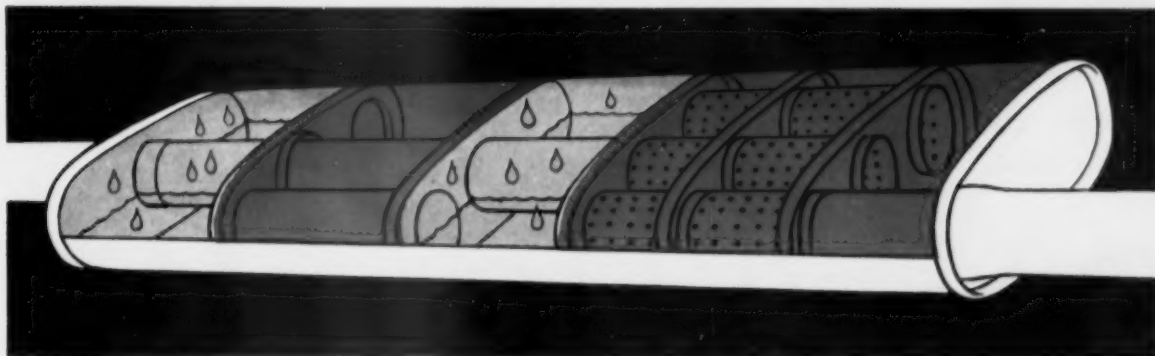
AP

LONGER-LASTING MUFFLERS — DESIGNED FOR TODAY'S

HAS NO HOT OR COLD SPOTS, AP MUFFLERS LAST LONGER



New AP "Dri-Flow" Design retards condensation and internal corrosion, because the heat is distributed uniformly over the entire muffler. This moderate, even heat keeps the acid vapor moving harmlessly out of the tail pipe. At the same time, hot spots where burnout occurs are eliminated.



Hot-spot, cold-spot design of earlier mufflers condenses the acid vapor from the exhaust gases. More than a gallon of this acid-bearing water in the form of vapor passes into the exhaust system with every gallon of gasoline the engine burns. When this collects in the cold chambers it corrodes the muffler from the inside.

THE **AP** PARTS CORPORATION

3-T AP Building, Toledo 1, Ohio

Mufflers and Pipes • Miracle Power • dgt 123

HIGH-COMPRESSION ENGINES

Chilton's MOTOR AGE, JULY, 1957

Short muffler life has become a major problem on millions of late-model cars. To help solve this problem, AP makes a much stronger muffler. For years, AP mufflers have had up to $\frac{2}{3}$ heavier heads, $\frac{1}{3}$ thicker shells. And many have asbestos liners or corrosion-resistant aluminized and zinc-coated steels. Now the new "Dri-Flow" Design which cuts down rust-out and internal corrosion is on more than 50 popular numbers, and is being added to others as fast as production permits. It's an unbeatable combination for longer muffler life: longer-lasting inside, longer-lasting outside. *Yet your customers pay no more for AP mufflers!*

Your customers will find that AP gives longer service, more power, better gas mileage, and surer protection from carbon monoxide. As a dealer, you'll find AP's years-ahead "Dri-Flow" Design easy to show, easy to sell with the sure-fire "Tap, Look and Listen" program.

- | | |
|---|--|
| (8) Salaries and Wages—
Clerical | Administration |
| (9) Salaries and Wages—
Used Car | (15) Salaries—Officers and
Owners |
| (12) Salaries and Wages—
Parts and Access. | (16) Used Car Preparations
and Conditioning |
| (13) Salaries and Wages—
Service | (17) Labor—Customer Repair |
| (14) Salaries and Wages— | (18) Labor—Body and Paint |
| | (19) Pre-Delivery and Free
Service |

IT TAKES LONG LIVED QUALITY



Those shiny new Rotors and Distributor Caps won't look the same after even a hundred miles. Vibration, knock, bump! Heat, cold, water, oil! How long can they stand it?

TO MAKE LONG TIME PROFITS

There's no profit in a chipped rotor, no protection in a cracked cap. That's why the smart boys insist on replacing with P & D Quality Controlled parts. P & D's rigid control system starts with the raw materials, continues with engineering and production line supervision, winds up with a triple inspection of the finished product.

For the sake of your reputation and your profit make P & D your standard for all ignition jobs.





MANUFACTURING CO., INC.

Established 1920

19-02 Steinway St., Long Island City 5, N.Y.

Export Sales: Borg-Warner International, 36 So. Wabash Ave., Chicago 3, Ill.

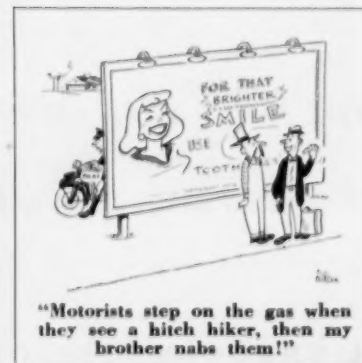
This is just one more job that used to be done by the painstaking spread-sheet method. You might call the analysis machine a high-speed mechanized spread sheet; that's about what it is.

A 3-total National "32" machine is used for all posting work. While this equipment is much lower in cost than a full-sized bookkeeping machine, it has all the features needed, including an electric typewriter. It is employed to do what it was built to do—post, not analyze. We have already seen that the totals from the various analysis runs are posted to ledger cards on this machine. Now we can take a brief look at some of the other jobs.

The accounts receivable operation is nothing more than a simple debit-credit-balance posting job. As shown at the top of page 82, statement and ledger card are created simultaneously. The machine, of course, computes and prints new balances automatically, and also accumulates the over-all posting. Credit balances automatically print in red.

On page 38 is shown the accounts payable setup. Vendors' invoices are journalized, vouchered and distributed to the proper accounts in one operation. The top copy of the voucher acts as a remittance advice. When it is time for payment,

(Continued on page 91)



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THERE ARE RINGS
AND THERE ARE RINGS
BUT...

**THERE'S NOTHING
LIKE THE**

McQUAY-NORRIS

**AT OPEN THROTTLE HIGH SPEEDS AND AT
HIGH VACUUM LOW SPEEDS**

**CHROME
CONTROL**

LEAK-PROOF.

**PISTON RINGS HAVE
CRACKED THE OIL MILEAGE BARRIER!**

INSTANT BREAK-IN!



**TOP PERFORMANCE
IMMEDIATELY.**

Chrome Control rails are prepared for instant mating, before installation, by the exclusive McQuay-Norris heat shaping process, followed by lapping. They *start* with perfect bearing on the cylinder wall surface. To facilitate *immediate* top performance, Chrome top rings are used only where needed.



NO OIL WASTE!

AT HIGH SPEED DRIVING.

Special patented flexible expander prevents high speed ring "flutter" and "surfboarding". Chrome Armored steel rails wipe oil from cylinder walls and safeguard cylinders.

AT LOW SPEED DRIVING.

Specially designed and machined separator ring supports and stabilizes Chrome Armored steel rails—prevents rocking—seals the groove—prevents low speed oil "c-r-e-e-p" around the ring due to high vacuum—yet permits free action in the groove.

McQUAY-NORRIS MANUFACTURING CO.

ST. LOUIS • TORONTO

LARGEST PRODUCER OF SMALL RINGS IN THE AUTOMOTIVE INDUSTRY

CRIS "400" OIL RING



**NO FRILLS
NO TRICKS
NOTHING FANCY PANTS
ABOUT IT...
JUST GREAT
PERFORMANCE!**

**IT'S IN EVERY CHROME
CONTROL**

LEAK-PROOF®

PISTON RING SET

PRINTED IN U.S.A.

**SPECIFICALLY DESIGNED FOR EVERY MAKE AND MODEL
TOP CHROME RINGS WHERE NEEDED**

McQUAY-NORRIS

COMPLETE LINE SERVICE



**APPROVED ORIGINAL EQUIPMENT FOR
CARS, TRUCKS, BUSES, AND TRACTORS**

the checks are written by machine and a check register created automatically as a by-product (not shown).

Twice a month, payroll for 60 employees is written by machine. The earnings record, pay statement, check, check register and payroll journal are all printed at the same time. Earnings, withholding tax and F.I.C. to date are automatically computed and printed by the machine on each employee's earnings record.

In any discussion of system, cost is one of the first things that comes to mind. Let us point out immediately, then, that unless an agency is very small, a system like this costs less than nothing. The biggest part of it can be paid for out of the saving in forms cost alone. We save more than \$400 a year by using machine forms in place of expensive pen-and-ink journals and ledgers. But this isn't the most important item. Better than half of one person's time has been saved; time that we can use to very good advantage; time worth another \$1500 a year.

But perhaps equally important from an owner's viewpoint is the fact that you can see the gross for the day, in every department, and be absolutely confident that the figures are right. Sales and cost of sales are always up-to-date and in proof.

In fact, any question about any record can be answered instantly. "How much do we owe the Acme Company?" — "What has Cal Jones earned so far this year?" — "What's our total accounts receivable outstanding?" — "How much does Smith owe?" — are questions that can be answered just as quickly as "How did we do yesterday?" in any given department.

We are a Ford dealer. But the

problems we have are exactly the same as the problems in any other kind of dealership; there isn't a shred of difference. This system will provide the "answers" for any dealer, and will tie in exactly with the accounting requirements of any manufacturer.

If it were costly to obtain the kind of records we have, one might hesitate to look into such a system. But since it actually saves money above its own cost, in addition to providing all information on a day-to-day basis, in the most legible possible form, we feel that it's well worth investigation by all but the smallest agencies in the business.

\$3,969

IN ONE MONTH

REPAIRING RADIATORS!



Inland Trained Radiator Repairman Soldering Radiator

"My INLAND Radiator Department brought in an additional \$3,969 in a single month!" says Bob Neyland, Neyland's Paint & Body Works, Baton Rouge, La.

\$10,000 to \$20,000 a year additional volume is common! "\$16,750 in one year!"—McRill's Auto Repair and Radiator Service, Twin Falls, Idaho. "\$18,000 in one year!"—Clough Auto Parts, Storm Lake, Iowa. Radiator servicing brings more profit per sq. ft. than any other activity in the service area!

20 to 30 Million Radiators Need Servicing Yearly! Tests prove 83% of all radiators over a year old are partly plugged. Inland equipment demonstrates need for radiator-cleaning—is designed for fast easy production methods—stays neat and clean.

Inland, world's largest radiator equipment manufacturer, offers the complete package—Equipment, Training, Merchandising, "Pays-For-Itself" Purchase Plan.

Mail Today!

New free 48-page book "Blueprint for Profits" shows equipment, training course, "Pays-for-Itself" purchase plan and experiences of other operators. Take a minute and mail the coupon now.

INLAND MFG. CO.
1108 Jackson St.
Dept. MA-7, Omaha 2, Nebr.

INLAND MFG. CO., Dept. MA-7
1108 Jackson St., Omaha 2, Nebr.

Please send new free book "Blueprint for Profits."

FIRM _____ PLEASE PRINT

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If Dealer, make of car sold _____

Are you now operating a radiator dept. ☐ Yes ☐ No



**At your
service!**

SERVICE PARTS DEPOTS

LOCATION	FIRM	CITY & STATE
Alabama.....	Pump Shop, Inc.	Birmingham, Ala.
Arizona.....	Shields, Harper & Co.	Ploemta, Ariz.
California.....	Jordan's Air Supplies	Los Angeles, Cal.
	R. & G. Poles Co.	San Francisco, Cal.
	Shields, Harper & Co.	Oakland, Cal.
Colorado.....	Eaton Metal Products Co.	Denver, Colo.
Connecticut.....	Gerard Electric Co.	Boston, Mass.
Delaware.....	Emco Service	Philadelphia, Pa.
Dist. of Columbia.....	Emco Service	Philadelphia, Pa.
Florida.....	Equipment Sales Co., Inc.	Atlanta, Ga.
Georgia.....	Equipment Sales Co., Inc.	Atlanta, Ga.
Idaho.....	Eaton Metal Products Co.	Billings, Mont.
Illinois.....	Carwasher Equipment Co.	Chicago, Ill.
Indiana.....	Indiana Oil Equip. Co., Inc.	Indianapolis, Ind.
Iowa.....	The Brasco Co.	Chicago, Ill.
Kansas.....	Money Equipment Co.	Wichita, Kans.
Louisiana.....	Gerard Electric Co.	New Orleans, La.
Maine.....	Gerard Electric Co.	Boston, Mass.
Maryland.....	Emco Service	Philadelphia, Pa.
Massachusetts.....	Gerard Electric Co.	Boston, Mass.
Michigan.....	Air Compressor Service	Wayne, Mich.
Minnesota.....	Products, Inc.	Minneapolis, Minn.
Mississippi.....	Petroleum Equipment Co.	Jackson, Miss.
Missouri.....	Downey Equipment Co.	St. Louis, Mo.
Montana.....	Valley Motor Supply Co.	Butte, Mont.
Nebraska.....	The Brasco Co.	Wichita, Kans.
Nevada.....	Shields, Harper & Co.	Oakland, Cal.
New Hampshire.....	Gerard Electric Co.	Boston, Mass.
New Jersey.....	Emco Service	Philadelphia, Pa.
New Mexico.....	Eaton Metal Products Co.	Albuquerque, N. M.
New York.....	Hub Engineering Corp.	New York, N. Y.
	Sager Spack Supply Co., Inc.	Albany, N. Y.
North Carolina.....	Colson Murray Co.	Greensboro, N. C.
North Dakota.....	Products, Inc.	Minneapolis, Minn.
Ohio.....	Ohio Auto Parts Co.	Columbus, Ohio
Oklahoma.....	United Pump Supply, Inc.	Dallas, Texas
Oregon.....	Equipment Distributors, Inc.	Portland, Ore.
Pennsylvania.....	Shields, Harper & Co.	Philadelphia, Pa.
Rhode Island.....	Gerard Electric Co.	Boston, Mass.
South Carolina.....	Colson Murray Co.	Greensboro, N. C.
South Dakota.....	Products, Inc.	Minneapolis, Minn.
Tennessee.....	Petroleum Equipment Co.	Nashville, Tenn.
	R. B. M. Co.	Knoxville, Tenn.
Texas.....	United Pump Supply, Inc.	Dallas, Texas
Utah.....	Eaton Metal Products Co.	Salt Lake City, Utah
Vermont.....	Gerard Electric Co.	Boston, Mass.
Virginia.....	Emco Service	Philadelphia, Pa.
Washington.....	Shields, Harper & Co.	Seattle, Wash.
Wisconsin.....	C. & H. Elec. Machine Co., Inc.	Milwaukee, Wis.
Wyoming.....	Eaton Metal Products Co.	Denver, Colo.

Parts and service as close as your phone . . . whenever an air compressor emergency arises. That's the job being performed today by the nationwide network of Kellogg-American Service Parts Depots.

These firms carry a comprehensive stock of parts and complete assemblies to meet all your compressor needs. They are staffed with experienced men to do the job fast and right. Check this listing of Kellogg-American Service Parts Depots . . . there's one in your area waiting to serve you.



Kellogg Division • Rochester, N. Y.

AUTOMOTIVE EDUCATION

Training Centers For Chrysler Corp.

Plans to construct four additional Chrysler Corporation Training Centers for the training of dealer sales and service personnel throughout the U. S. were announced by W. C. Newberg, automotive group vice president.

First of the four training centers will be built in Atlanta, Ga. Other locations under consideration are in the New York, Chicago and Los Angeles areas. Each center will be a two-story, 54,000 sq. ft. building.

Sales and service training activities at the four new centers will be directed by the company's training center headquarters in Detroit.

Each of the new training centers will be able to train an estimated 4,000 dealer sales personnel and 1,600 dealer service personnel annually when in full operation.

110 Mechanics Complete Course

The Automotive Wholesalers of Texas organization has announced that seven "schools" of the jointly-sponsored automatic transmissions training program for Texas mechanics were completed in May. The fourteen weeks completed saw a total of 110 mechanics trained in this specialized field out of 112 enrolled originally.

Curriculum covered actual take-down and re-assembly of practically all types of automatic transmissions. In addition to the night sessions, Mr. George Burt, instructor, spent the daylight hours in the respective shops of the enrollees helping them with specialized problems in automatic transmissions.

Kellogg-American

A-3537



worth a good look: Gabriel AjustOmatics

Gabriel AjustOmatic is the *only* hand-adjustable shock absorber. You adjust it during installation—for normal, soft or firm control. On any car, it gives the added stability, roadability and comfort so many owners want. Any time a customer wants something different from "average ride"—you've got a customer for Gabriel AjustOmatic. The price and profit picture are mighty attractive. Get the full facts from your Gabriel Jobber.

THE GABRIEL COMPANY, CLEVELAND 15, OHIO



Gabriel
AJUSTOMATIC
SHOCK ABSORBERS



*It happened at
"the world's toughest
proving ground"...*

INDIANAPOLIS

*Still bunched up at the start of the 1957 "500"—a contest that
saw 9 Champion-powered racers break the existing track record*



SPEED RECORD SHATTERED BY 11 CARS— 9 OF THEM POWERED BY CHAMPION SPARK PLUGS!



Dependable 5-Rib

CHAMPION

SPARK PLUGS

Year after year, Champion-equipped cars pick up prizes at the big "500." In the last 10 races, 83 of the 100 "top 10" Indianapolis finishers have been powered by Champions. Here's what Champion's amazing record means to your customers.

The big brick oval at Indianapolis is more than a great race track. It's famous as the world's toughest proving ground for many outstanding automotive products, such as Champion Spark Plugs.

No other spark plug has ever come close to Champion's great Indianapolis record over the years. For instance, 26 of the last 33 races were won by Champion-powered cars. This year 9 of the 11 record-breaking cars used Champions. In the last 10 years, 83 of the 100 "top 10" finishers were Champion-equipped.

Such records mean that you can recommend Champions for *all* your customers, knowing they will always get outstanding performance from dependable, Champion Spark Plugs.

*Sincerely,
Jim L*

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO

Paint More Light . . . Continued from Page 39

one look at the reflection factor chart shows that there are several practical colors which look good, and also reflect a fair amount of light.

For example, the ceiling could be either white or grey white. The upper walls might be either light green or light tan. The

lower walls up to the working level might perhaps be painted a little darker green to hide dirt. Then a coat of light grey deck paint on the floor would finish the job. Flat paint would be desirable throughout to reduce glare, but gloss paint could be used if the service area is ex-

posed to an excess of dirt or fumes.

These colors are both pleasant to work with and efficient as reflectors. The reflection factor of the combined colors would average about 70 per cent. This compares favorably with an average of under 50 per cent for the dirty, unpainted walls found in some service shops today.

This is a wide gain in lighting efficiency—all from a wise choice of colors, and without even touching the lighting system. And if you were to modernize the lighting system too, the increase would be even greater.

In either case, increased efficiency and better workmanship that you will get from better light are more than worth the cost and effort.

Shop Safety . . .

Continued from Page 41

stance could be translated into weekly wages.

PERSONALIZED POSTERS: Safety posters are good safety-stimulators. Their value can be increased, however, if they are personalized to the garage and the mechanics. Photos of accidents in the shop add a personal touch and tend to eliminate the thought, "It couldn't happen here."

One garage, for instance, ran a series of photos of shop accident causes. These were not complete photos, but the main idea was still included. The poster asked this question, "Where is this?"

Employees made guesses about the location of the unsafe conditions in the shop. They accused workers in other departments. They were more careful in their own work space. They were made safety conscious through this safety-stimulating idea and the accident rate took a dip in the garage.

14" Tires are Easier to Change

ON A BISHMAN Tire Changer

In fact you can change tires on *all* wheels, from 12" and 13" wheels on those little foreign jobs and farm implements to 17½" light truck tires, on one machine without extra attachments or tools. Even the new type demountable rims are easy because the BISHMAN self centering rim chuck doesn't need a wheel disc with hole as the cone type machines do.

With a BISHMAN Tire Changer you are prepared for *all* wheels, now and in the future.

Removing and mounting the tire is done with only *one* tool, specially designed to lift the bead gently *off* the rim or slide it *on*. No extra tools or tool stands are needed.

Built-on double bead breaker has extra wide shoes that *roll* off the tightest bead without damaging air seals or marring sidewalls. Both beads can be broken at one time or those extra tight ones can be broken one at a time without turning the tire over.

For tops in speed and efficiency use the BISHMAN #880 Electric Tire Changer—the only power tire changer for tires from 12" to 17½".

For tops in simplicity and easy operation
choose from one of 3 BISHMAN Hand Operated
Models, with prices starting as low as

\$109⁵⁰

Modern BISHMAN Equipment is sold only through leading Automotive Equipment Jobbers.
Ask your local jobber about Bishman Equipment to solve your service problems.

Bishman

MANUFACTURING CO.
ROUTE 2, OSSEO, MINN.



#880
ELECTRIC
TIRE
CHANGER



#881A
HAND TIRE
CHANGER



Ford Dealer Herb Estes reports:

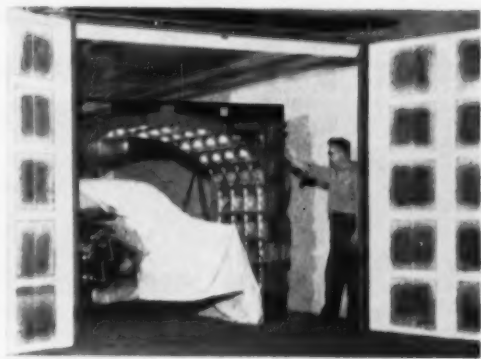
"We're doing 40% more appearance work since installing our DeVilbiss paint shop!"

"With the public more style and beauty conscious, the part played by appearance service is growing in importance," says Herb Estes, of Herb Estes, Inc., Ann Arbor, Michigan, Ford dealer.

"That's why, when we decided to build our modern, new facilities in Ann Arbor, we included a complete DeVilbiss paint shop. Our customers like it too. Appearance work has increased 40%. And we're able to handle this new volume with the same crew.

"With our DeVilbiss guns and our DeVilbiss spray booth, we have the kind of precision spray equipment, and scientific lighting, exhaust and dust protection that enable our operators to turn out top-quality paint jobs at 'production-line' speeds."

Would you like to step up appearance-service volume? Then talk to your DeVilbiss representative. He can recommend the right equipment for your specific needs — spray guns, air compressors, spray booths, transformers, paint-baking ovens, hose and connections.



"A DeVilbiss paint shop doesn't cost money; it saves it!" says Herb Estes. Here, a traveling infra-red baking oven quickly dries paint — speeds up production, gives dust-free finishes.

THE DEVILBISS COMPANY

Toledo 1, Ohio

San Jose, Calif. • Barrie, Ontario • London, England

BRANCH OFFICES IN PRINCIPAL CITIES



Differential Continued from Page 45

blocks beneath the propeller shaft to hold it stationary. On the side with the wheel removed, turn the brake drum forward until it stops. Mark both the brake drum and the flange plate while holding the drum in this position. Turn brake drum its full limit rearward and place a

second mark on the brake drum opposite the mark in the flange plate. Now measure distance between marks on the brake drum. Distance between the marks should not be more than $\frac{1}{2}$ inch, otherwise rear axle backlash is considered excessive.

Backlash found by the pro-

ceeding check was confined to the rear axle. The possibility of interference by transmission backlash was eliminated by blocking the propeller shaft. If backlash is excessive, remove the Positraction differential, check for worn or scored parts and replace as necessary. If no worn parts were found, two .005 washer type shims should be cut from shim stock. One shim should be installed between the outboard clutch plate on both the differential carrier and case sides of the differential. The shim outer diameter should be cut to $3\frac{1}{4}$ inch and the inner diameter $2\frac{3}{8}$ inch.

Reassemble the differential, insert a stub axle shaft into the differential being sure to engage the splined side gear retainer. While holding the ring gear side carrier, turn the axle shaft. The axle shaft should turn firmly. Then repeat the same check on the opposite side. If axle shaft is locked up on either side, or it is impossible to turn while holding the ring gear carrier stationary, decrease the shim gear thickness to .003 inch on that side. Repeat the check. If axle is still locked no shims should be used on that side. Because of the manufacturing tolerances and variations in wear, it is possible that only one clutch stack would require shims.

Where the stub axle will turn after the addition of a .005 inch shim, it is good practice to add shims in .002 inch increments until the axle locks. Then the last .002 inch shim should be removed. To reassemble, hold ring gear flange on its side. Install side gear retainer and clutch plates alternately. In such manner that an external tanged plate is installed first and an internal splined plate last. Make sure the side gear retainer will rotate with a slight drag when in the case.

(Continued on page 100)



Help your customers be safe and sure with every stop!

Satisfied customers are your best assets—don't gamble with their safety! Your state law may already require the use of an SAE 70R1 heavy duty brake fluid. Sell them Puritan Super 60—it does a better, safer, surer job. Here's why:

- **Highest Heat Resistance**—safety margin over 400° F.
- **Highest Rust Resistance**—chemical inhibitors provide unequaled moisture protection.
- **Proper Viscosity**—at both high and low temperature extremes.
- **Chemically Stable**—won't break down. Always gives safe, sure stops.
- **Compatible**—mixes with all other brands.

Puritan Super 60 meets and exceeds these and all other SAE 70R1 specifications.



OLIN MATHIESON CHEMICAL CORPORATION

Automotive Products Department • Baltimore 3, Maryland

More Profit Per Job



- CUTS LABOR 50% OR MORE
- LOWER MATERIAL COST
- BETTER WORKMANSHIP

REN—THE DEPENDABLE AUTOBODY REPAIR MATERIAL is the outstanding epoxy plastic paste which bonds to any clean metal, wood, glass or other plastic. It holds its bond where other materials fail.

Shops prefer Ren for it is easy to apply. Will not shrink, crack, rust, rot or mildew. It is not affected by heat or cold.

Ready to Finish in 5 Minutes

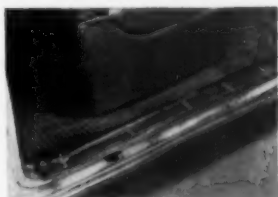
Ren hardening can be controlled, 1 to 5 minutes with heat or 2 to 4 hours at room temp. of 75°. Ren needs no special attention, feathers out to mirror smooth, can be filed, sawed or drilled without pulling from repair.



- REINFORCES
- REBUILDS
- REPAIRS

rips, tears, dents body rot easily and does a better job.

THIS JOB DONE IN LESS THAN 1 HOUR FROM START TO FINISH



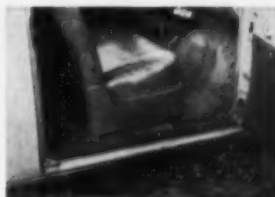
Extreme rot in rocker panel before rough sanding—usually this work requires replacement with new part.



After rough sanding holes are filled with steel wool for Ren backing, before application, which saves material.



After applying Ren to contour heat lamp was used to speed material hardening before feathering out.



Rocker panel completely finished with final coat of paint. This difficult job was finished in less than one hour.

GREATER PROFITS—Ren saves time, labor and material. The initial cost is lower. A 3 lb. can of Ren has filling power of 19 lb. to 20 lb. of hard solder.

NO WASTE—Ren can be mixed in just the right quantity needed for the specific job to be done.

SAFE—Ren uses no acids or highly inflammable solvents. Takes all paints. Won't bleed, blister or crawl finish.

FASTER—In 4 simple steps Ren is ready to finish. The average job can be done in less than half the usual time required with other materials and methods.



CALL YOUR JOBBER NOW!

REN PLASTICS, INC. LANSING 9, MICHIGAN

DEPENDABLE PLASTICS FOR THE AUTOMOTIVE INDUSTRY SINCE 1938



Differential Continued from Page 98

Repeat for the opposite side. Install side gear on ring gear flange half. With the ring gear flange half of the differential case in a vertical position, install one shaft and gears and make certain that the notch in shaft is up.

Install remaining shaft and gears. Install side gear in other half of case. Hold the remaining case half through the bearing trunnion and install it on the ring gear flange half. Make certain that identification marks are in alignment. Tighten the eight attaching bolts evenly to 35 to 45 ft. lbs. torque to avoid distortion to case assembly.

Check the clearance between the pinion mate shaft and the V of the case. This is done by placing shim stock or feeler gauges on both ends of the same shaft and on opposite sides of

the V. The clearance should be .010 to .035 inch.

When installing the unit in the car make sure the spline end of the axle shaft does not interfere with the pinion mate shaft. This is best determined by measurement. Use a steel tape and with the aid of a flashlight, measure from the bottom of the axle shaft bearing bore to the pinion mate shafts.

Then measure the axle shafts from the corresponding point of the bearing to the end of the spline. The minimum clearance required is $\frac{1}{8}$ of an inch. Grind off the spline end of the axle shaft if it is too long. Check the other axle shaft in the same manner.

Caution: Do not spin wheels with one elevated as it is possible to have sufficient driving load due to friction and so forth

to actuate the Positraction unit and cause the car to move or jump off the jacks.

Lubrication

Lubrication requirements are the same as those required for conventional rear axles, except at the time of initial installation and for ring gear and pinion replacement. Before installing a new unit the axle housing should be thoroughly flushed and wiped clean of any material or chemicals which might possibly be injurious to the clutch plates.

Should it be necessary to install a new ring gear and pinion set in a Positraction equipped axle, do not use the lubricant packaged with the ring gear and pinion set. Use in its place SAE 90 Multi-Purpose gear lubricant or equivalent.

The package lubricant must not be used because it contains active sulphur ingredients which have a highly adverse

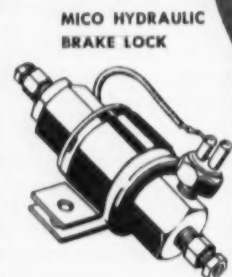
(Continued on page 102)

MICO HYDRAULIC PARKING LEVER LOCK

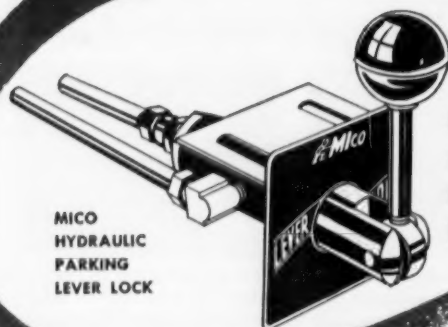
Electrically actuated units shown below also available



MICO AIR
BRAKE LOCK



MICO HYDRAULIC
BRAKE LOCK



MICO
HYDRAULIC
PARKING
LEVER LOCK

Simply raise the lever, step on the pedal and the biggest truck, the heaviest, load is SAFE!

**IT'LL HOLD 'EM
ON A DIME!**

- EASY MANUAL RELEASE • NO ROLL BACK EVER!
- WILL NOT INTERFERE WITH A NORMAL BRAKING OPERATION
- SIMPLE TO INSTALL • SELF SEALING HYDRAULIC CHECK VALVE DESIGN

MINNESOTA AUTOMOTIVE, INC.

1101 NORTH FRONT ST.
MANKATO, MINNESOTA



Post Hole Digger



Cement Mixer



Ditch Digger



Dump Trucks

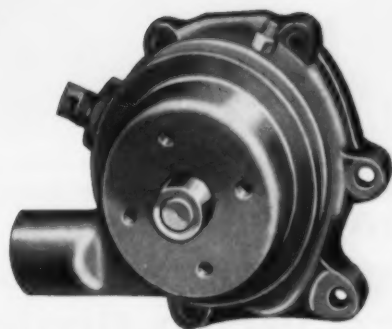


Tow Trucks



Fire Equipment

Write for information
on all MICO Brake
Products



THOMPSON WATER PUMPS FIT THEM ALL

You can depend on Thompson to supply a factory duplicate water pump for virtually any car in use today, regardless of make, model or year, as well as many trucks and tractors.

Skilled hands machine and hone each pump part for precision fit. Critical engineers torture-test each model for the equivalent of a car's operational life. As your final insurance of a trouble-free, leak-free installation, every Thompson Water Pump shipped is vacuum tested against the most minute seal or assembly defect.

To get the water pump you need, to be sure of reliable service and a satisfied customer—specify Thompson.

**Thompson Service
Sales Division**



Thompson Products, Inc.
Cleveland 3, Ohio



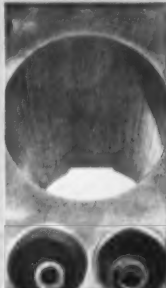
At left is pictured some of the officers and directors attending the Automotive Old Timers Philadelphia Metropolitan Council Spring luncheon recently. Newly elected officers include (left to right): Ira Hann (Director), Charles Snyder (Vice Pres.), R. A. Harp (President), Julie Driscoll (Secretary-Treasurer), Arthur Berry (Director), and Frank P. Tighe (National Director).

Why it pays you and your customers to replace worn timing chain and sprockets at every engine overhaul

Damage From Faulty Timing



PLUG FOULING. Creates fuel waste, reduces economy.



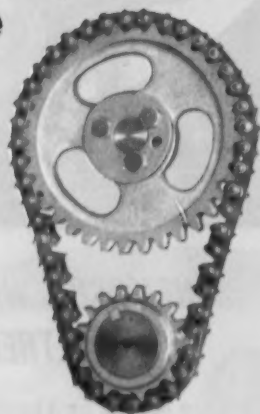
SCORED CYLINDERS. Loss of compression, waste oil and fuel.



BURNED VALVES. Cause fuel waste, cut engine efficiency.



DAMAGED PISTONS. Result of backfire through carburetor.



Use LINK-BELT ... world's finest original equipment line

To give your customers "new-car" power that wins confidence for your service, install Link-Belt timing chain and sprockets at each overhaul. Link-Belt's segmental bushing design substantially reduces slap, back-bend, whip—delivers accurate valve timing for miles of top engine performance and economy. See your jobber—he can furnish Link-Belt timing chain to fit any engine designed for chain.

14-479

LINK-BELT

TIMING CHAIN AND SPROCKETS

LINK-BELT COMPANY; 220 South Belmont Ave., Indianapolis 6, Ind. Warehouses in all principal trading areas.



C. A. (Art) Fox, president of the National Automotive Maintenance Association, who presided over the recent semi-annual executive committee meeting of the association at Fort Wayne, Ind. Mr. Fox operates Fox Garage in Cedar Rapids, Iowa.

Don't fight a problem—work to find a solution.

Differential . . .

Continued from Page 100

effect on the Positraction clutch plates.

Positraction rear axles are filled with SAE 90 Multi-Purpose gear lubricant when installed as a regular production option at the assembly plants.

Periodic service requirements are the same as those required for conventional differentials. Change the oil after the first 1000 miles to remove any material resulting from run-in. Then change the oil every 10,000 miles or seasonally thereafter.

IMPROVED PERFORMANCE—LONGER LIFE—WIDE APPLICATION

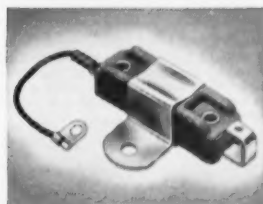


CAM-4001

With New AUTO-LITE Oil-Filled Coil

Ignition-engineered to give quick starts and lower operating temperatures in any Auto-Lite 6-volt system

- **Improved performance.** Oil circulating inside coil provides a 15% increase in heat dissipation.
- **Longer life.** 1/10 inch of space electrically seals off up to 30,000 volts through the use of a special oil with greater insulating qualities.
- **Moisture-proof hermetic sealing.** Seamless outer wall construction, vacuum filling, plus spring-loaded gasket assure positive seal.
- **Wide application.** The CAM-4001 coil can be used on all Auto-Lite 6-volt systems.



Availability of resistor as a separate unit makes possible its location at any point in the primary circuit without affecting performance.



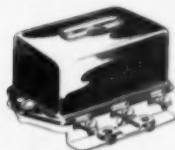
Bracket CAH-3
Universal bracket for all Auto-Lite Oil-Filled Coils.

ORIGINAL
AUTO-LITE
SERVICE PARTS ^(R)

NOTE: In marine applications where engines are located below decks or in confined areas, the location of the resistor should be carefully selected so that the resistor wire will not be exposed to explosive atmospheres. The resistor may be located at any point in the primary circuit without affecting ignition performance. This flexible mounting permits the location of the resistor at a point remote from the engine compartment (for instance, at the ignition switch on the dash).

THE ELECTRIC AUTO-LITE COMPANY • TOLEDO 1, OHIO

BUILD YOUR PARTS VOLUME AND PROFIT WITH FAST-MOVING AUTO-LITE ORIGINAL SERVICE PARTS.



VOLTAGE REGULATORS



CONTACT SETS



DISTRIBUTOR CAPS AND ROTORS



CONDENSERS

Roy has a connection with a chrome plating house that have all the various types in stock. So Roy gets on the phone and tells them what to ship him. In turn, Roy sends them the old ones on an exchange basis . . . paying the difference with no waiting to have the customer's old ones straightened and replated.

"On this type work," said Roy, "I can save the insurance adjusters between 25 and 30 percent compared to locating and buying new face bars, providing I could locate them."

Builds up Good Will

Roy works with the customers to make the adjusters' work as light as possible. He will take his time to explain to an unreasonable client why they can't "hang" it on the insurance company. And this gains the adjusters' good will.

In making his estimates, Roy doesn't get right down to penny detailing. Often, Roy is a little higher in his bid than others. Still he gets the job. More often than not, the customers insist Roy's do the work. And, for the small difference involved, the adjusters go along.

On hurry up jobs, Roy will assign 2 journeymen to a job, letting them split the customer-labor charge. Besides, he may throw them one or two helpers, depending upon the nature of the work.

Roy's new addition measures 40 x 75 . . . this will give him a building that measures 70 x 75.

Facing Today's Conditions

"Our rapid growth," Roy says, "we like to think, is the result of facing today's conditions, and not trying to operate according to yesterday's system. Customers are no longer hunting

cut-rate shops . . . unless they are driving obsolete models. And motorists driving late model cars are not about to take their car to a bone-yard shop to be worked on. And they surely will not willingly allow an insurance adjuster to send their car to such a shop."

Roy estimates that his shop's monthly average income from metal work amounts to \$3,000; from painting, \$1,100; from mechanical work, \$1,000 and \$1,250 from parts and accessories.

Fortunate is the motorist who leads a wreckless life.

Oldsmobile Names Grobe to New Post

Lloyd A. Grobe [see photo], has been appointed advertising manager for the Oldsmobile Division. it was announced by V.

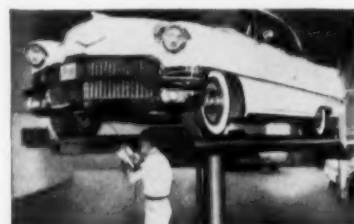


H. Sutherlen, general sales manager of Oldsmobile. He succeeds L. F. Carlson, who is retiring.

Grobe comes to Lansing, Michigan, from Los Angeles, where he has been business management manager for the Oldsmobile Los Angeles zone. He was born in Ymir, British Columbia. He attended the University of Idaho, majoring in business and pre-law.

WEAVER **SINGLE POST LIFTS** for limited service applications

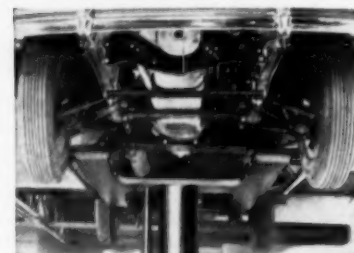
Weaver now offers 3 advanced designed Single Post Lifts for certain specialized services where these type of lifts may be of advantage. Each has a capacity of 8,000 lbs. and may be had in Air-Oil Operated Full-Hydraulic, Electric-Oil Operated Full-Hydraulic and Air-Oil Operated Semi-Hydraulic Models with Wall-Mount Type Controls.



WEAVER SINGLE POST ROLL-ON TYPE LIFT
The roll-on type lift is used without adapters or changes for any of the new American cars except the Metropolitan.



WEAVER SINGLE POST FREE-WHEEL RAIL TYPE LIFT. With this type lift extra service operations may be performed such as tire changing, wheel bearing service, brake work and other wheel service work. Front and rear adjustable adapters handle all cars.



WEAVER SINGLE POST FRAME TYPE LIFT
Single Post Frame Lift handles most passenger cars regardless of tread width except those cars not recommended by certain manufacturers.

Get all the facts on these 3 Single-Post Lifts. See your Weaver jobber or write us direct.

WEAVER
MANUFACTURING CO., SPRINGFIELD, ILL.
WEAVER SERVICE SHOP EQUIPMENT

**PUTS CAR WASHING SERVICE
ON A PROFITABLE BASIS!**



**Easy does it—
THE WEAVER WAY**

WEAVER AUTOMATIC OVERHEAD CAR WASHER

Take advantage of the full profit possibilities that car washing service offers. It's easy with a Weaver Automatic-Overhead Car Washer. This super-efficient unit will greatly enlarge your washing capacity . . . give you double the profits that is possible by manual washing.

No costly installation is needed. No tracks, large inlet pipes, special drains, storage tanks, splash walls or curtains are needed. You merely anchor chains overhead, connect water, and plug into electrical outlet.

The time-saving, profit producing results that others are getting — YOU can get. And best of all the Weaver Car Washer is reasonably priced.



with "Weaver-Gloss" Detergent and water as operator starts sponging at rear.

FINGER-TIP OPERATION

1 TEMPERING CYCLE. On flick of lever, "Spray Arch" automatically starts, moves length of car spraying it with clear water while front wheels are hand washed.

2 DETERGENT CYCLE. At end of "Tempering Cycle" the "Spray Arch" automatically reverses direction, sprays car

with "Weaver-Gloss" Detergent and water as operator starts sponging at rear.

3 SPONGING CYCLE. To permit completion of manual sponging, the machine stops at end of "Detergent Cycle" for an adjustable interval which is pre-set to suit manpower available.

4 RINSING CYCLE. After "Sponging Cycle," unit automatically starts, delivers 4 clear water rinses, and automatically shuts off.

See your Weaver jobber or write us for Bulletin MA-710

WEAVER

WEAVER MANUFACTURING CO., SPRINGFIELD, ILL., U.S.A. SERVICE SHOP EQUIPMENT

Complete Weaver line includes: Twin Post Lifts . . . Triple Post Lifts . . . Single Post Roll-on, Free-Wheel and Frame Type Lifts . . . Unit Lifts . . . Bumper Lift . . . Car Washers . . . Wheel Alignment Equipment . . . Headlight Testers . . . Brake Testers . . . Wheel Balancing Equipment . . . Jacks . . . Wheel Dollies . . . and Air Compressors.

Automatics Continued from page 47

run engine at curb idle for two minutes with the transmission in Neutral. Pour in 4 more quarts and allow engine and transmission to reach operating temperature. Move the hand lever or push button to all positions in order to fill the servos and return to Neutral. Recheck

the oil level and add fluid if required, but do not overfill.

Fordomatic, Merc-O-Matic, Turbo Drive, Flightomatic, Flash-O-Matic

Will be found on these cars (in order named): Ford, Mercury, Lincoln, Studebaker, Ram-

bler. Follow this procedure:

Drain and refill every 25,000 miles. Check oil level every 1,000 miles. Remove the drain plugs from both transmission oil pan and converter. Note: On models equipped with underhood filler tube, the tube connects to the drain hole. Loosen the hex nut and move the filler tube away from the drain hole. Reinstall drain plugs and add 5 quarts of Type A automatic transmission fluid into transmission. Start the engine and let idle for approximately 2 minutes and add 4 more quarts of fluid. After transmission reaches its normal operating temperature, move the hand lever through all positions and return to Park. Recheck the oil level.

Packard Ultramatic

Drain and refill every 25,000 miles. Check oil level every 1,-

Distinctive Packaging for Products of Distinction



ERTEL PRODUCTS

...the complete line of replacement parts...
truly "PRODUCTS OF PROVEN PRECISION"

Valves
Valve Springs
Valve Retainers
Valve Guides
Engine Bearings
King Bolt Sets

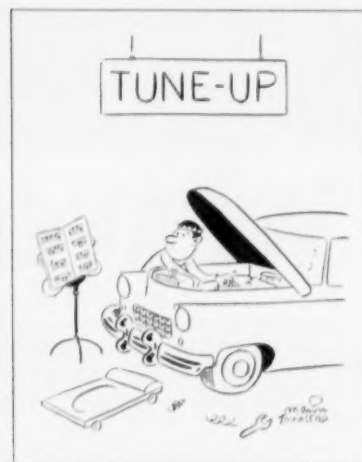
Tie Rod Ends
Drag Links
Shackle Sets
Cylinder Sleeves
Sleeve Assemblies
Pistons

Piston Pins
Pin Bushings
Wheel Suspension Parts
Water Pumps
Water Pump Kits
Motor Mounts



ERTEL PRODUCTS CO.

1400 East 20th St., Indianapolis, Ind.



000 miles. With engine and transmission warm, turn off ignition and unscrew both converter drain plugs, one to drain the converter, the other acts as an air vent. Remove transmission oil pan drain plug. Reinstall drain plugs. Add 7 quarts of Type A automatic transmission fluid into transmission. Start engine and run on fast idle for approximately two min-

(Continued on page 110)

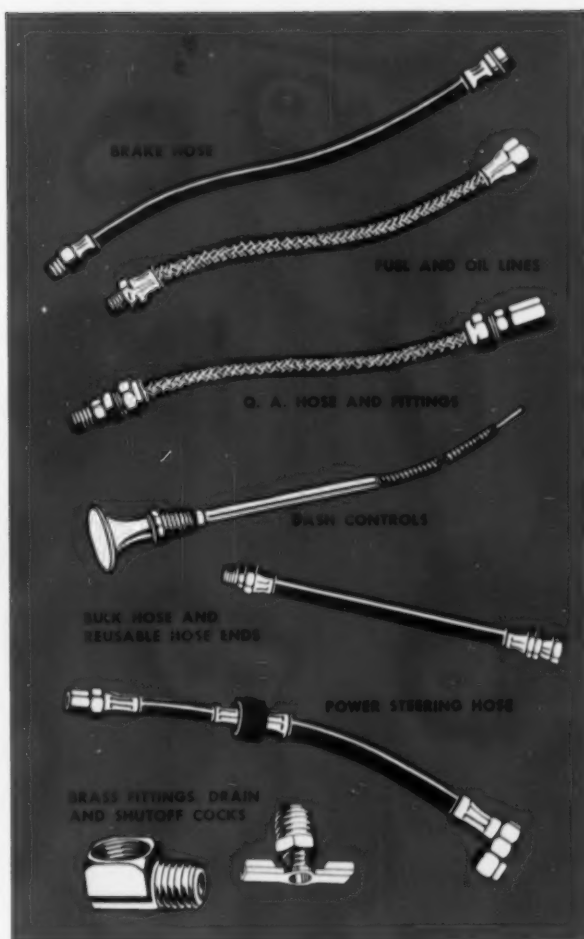
NEW

REPUBLIC ADDS COMPLETE LINE OF FITTINGS AND HOSES

Your satisfaction for 33 years is responsible for making Republic famous for finer automotive products. That's why Republic's new line of hoses and fittings for industrial, agricultural and hydraulic applications must meet the most rigid inspection before being added to the products shown below. These hoses and fittings are the same as used in original equipment production.

Exceptional service is offered through a system of 39 strategically located warehouses who serve our network of automotive wholesalers! Always well stocked, these warehouses assure you of the right items in the right amount right on time! Compare Republic—see for yourself.

Also announcing—complete new line of automotive fasteners.



57-A2

**THIS IS THE FAMOUS REPUBLIC LINE—TO WHICH
FITTINGS, HOSES AND FASTENERS HAVE BEEN ADDED**



UNIVERSAL JOINT PARTS
... a complete line



TRANSMISSION GEARS
... carburized and finish-shaved



OVERDRIVE REPLACEMENT PARTS
... for all makes of cars.



SMALL PARTS
... for automatic transmissions.



RING GEAR AND PINIONS
... lapped, matched and mated
AXLE SHAFTS
... made from highest grade alloy steels



TIMING GEARS
... both silent and metal
TIMING CHAINS
... factory pre-run, stiff-back feature

Republic
GEAR COMPANY



2197 Beaufait Avenue, Detroit 7, Michigan

REPUBLIC ... WHERE NEW PRODUCTS ARE SOLD UNDER A NAME
FAMOUS SINCE 1923!

men who look

FOR




ahead know the name is

CARTER



MODERN FUEL SYSTEMS



In today's ever-changing competitive situation you've got to keep a firm hand on your present profits . . . and your eyes on the road ahead! CARTER keeps you covered from both angles. Leading independent manufacturer of complete, modern automotive fuel systems . . . with sensational new CARTER engineering developments now taking final shape for your future profits!

**designed to the low lines
of America's Newest Cars
... new CARTER AFB
Four-Barrel Carburetor**

*Stock and sell the
CARTER line.
Call your CARTER
Supplier for details.*

CARTER CARBURETOR

DIVISION OF CUMMINS INDUSTRIES

INCORPORATED

ST. LOUIS 7, MISSOURI

Automatics Continued from page 106

utes. Turn off ignition and add 5 more quarts of fluid. Again start the engine, run on fast idle a few minutes, turn off ignition and recheck oil level.

Plymouth Hy-Drive

Under normal driving conditions drain and refill twice a

year. Check oil level every 1,000 miles. Drain crankcase and converter. Reinstall drain plugs and pour 10 quarts of proper viscosity engine oil into crankcase. Start engine and allow to run at fast idle for approximately 5 minutes. This is to allow the oil to circulate and fill

the converter. Now recheck the crankcase oil level, if not up to "FULL" mark add the balance of oil as required.

Studebaker, Hudson Automatic Drive

Drain and refill every 15,000 miles. Apply the parking brake, start the engine, set selector lever in "L" (low) position and let engine idle until transmission is thoroughly warmed up. Turn off ignition and remove the drain plugs from both the transmission oil pan and converter. (Note: To speed up draining the converter, remove the pressure take-off plug.) Reinstall drain plugs. Pour 4 quarts of Type A automatic transmission fluid in the Champion and 5 quarts in the Commander. Let engine idle for one minute. Place selector lever in the "L" position to allow the oil to be circulated from the gear box to the converter. Let the engine continue to idle and add 3 more quarts of fluid. Check oil level. If not up to proper level add 1/2 quart at a time to prevent overfilling.



Big profits are being made by replacing defective hydraulic tappets in modern overhead valve engines.

You can get your share of "ground floor" profits in this fast growing market by selling tappet jobs to your customers.

There is no mystery to installing Johnson Hydraulic Tappets. Simply follow instructions as well as good mechanical practices.

For many years the automotive market has profited with Johnson Adjustable Tappets for Ford and Mercury engines. Now, Johnson Hydraulic Tappets of the same fine quality and superior design, can be even more profitable.

"Tappets are our business"

JOHNSON JP PRODUCTS
INC.
MUSKEGON, MICHIGAN

New Continental Coming This Fall

A new version of the continental automobile will be introduced next fall by the Lincoln Division of Ford Motor Company. Ben D. Mills, company vice president and division general manager, announced recently.

The Mark II, currently being produced at its assembly facilities in the Edsel Division headquarters in Dearborn, Michigan, completed its model run May 15, with a total of 3,000 cars.

Continental production will move to the newly-opened Lincoln Division headquarters, northwest of Detroit, releasing the plant space to the Edsel Division.

**"Customer demand
for ROYAL TRITON
has doubled
since last year"**



Wayne Roberts, Service Manager, Arbenz Cadillac-Pontiac, Sioux Falls, South Dakota



"We've featured Royal Triton in our service department since 1951, and every year the demand increases. This year's Royal Triton sales will double last year's.

"Customers are quick to notice the improved performance they get with Royal Triton, and the word gets around.

"We recommend 10-30 for both Cadillacs and Pontiacs because it does such a wonderful job of keeping lifters free and engines clean. It's the oil that most all the fellows in the shop, including me, use in our own cars."

Wayne Roberts is right about "the word getting around." Royal Triton users are our greatest advertisements because they *do* tell their friends about and where to get this amazing purple oil. Stock it and cash in on the increasing demand for Royal Triton, America's finest motor oil.

UNION OIL COMPANY
OF CALIFORNIA

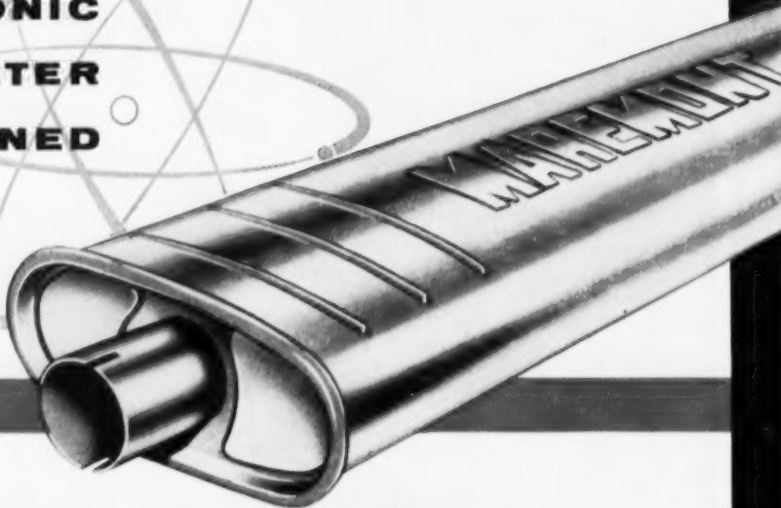
76

Los Angeles: Union Oil Bldg. • New York: 45 Rockefeller Plaza • Chicago: 1605 Bankers Bldg. • New Orleans: 644 National Bank of Commerce Bldg.
Dallas: 313 Fidelity Union Life Bldg. • Atlanta: 1401 Peachtree St.
Kansas City, Mo.: 612 West 47th St. • Boston: 213 Harvard Ave.
Philadelphia: No. One Wynnewood Rd., Wynnewood, Pa.

*** ELECTRONIC
DYNAMOMETER
DESIGNED**

*THE DESIGN OF
THE MODERN MUFFLER*

*Patent Pending



**TODAY IT TAKES
maremont
FOR LONG LIFE**

Today's high octane fuels are tough on mufflers . . . they produce greater amounts of acid and moisture condensation . . . special corrosion-resisting steels are a must!

Maremont tests mufflers . . . then selects special steels such as zinc-coated, stainless, ceramic and aluminized to beat corrosion—to better than double muffler life.

Sealed-in asbestos-lined shells and heavy baked-enamel finish are two more basic reasons for Maremont's long life.

And when it comes to safety, Maremont has

it! Multiple-wrapped, one-piece seamless shells, compressed and locked end caps and perfect fitting pipes and connections prevent deadly carbon monoxide leaks.

It's also Maremont for quietness. The exclusive Electronic Dynamometer tells what size, shape and arrangement of internal parts are necessary to remove objectionable noises created by the individual engine.

This is why today's modern engines need modern Maremont . . . the complete line of mufflers "electronically designed" for every make, every model vehicle.



8-FT DAY-GLO VINYL DRIVEWAY BANNER FREE TO MAREMONT DEALERS

• INSPECT 30 SECONDS • INSTALL 30 MINUTES • COLLECT 30 DOLLARS

For \$30.00 extra profit per week . . . ask your Maremont jobber salesman.



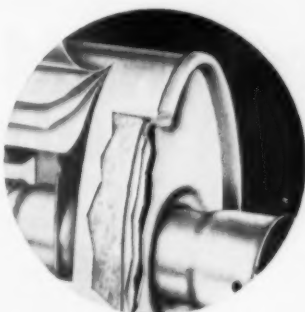
The Electronic Dynamometer—a Maremont invention that has revolutionized muffler design. This electronic device tells scientifically how to design and place muffler parts for maximum quieting, long life and safety—maintaining a minimum of back pressure.

CHECK THESE 3 MAREMONT LONG LIFE FEATURES



(1) SPECIAL STEELS

Where required, special steels such as zinc-coated are specified for shells, heads or internal parts to resist corrosive acids.



(2) SEALED-IN ASBESTOS LININGS

Maremont protects the asbestos with a full length, sealed outer shell . . . asbestos can't deteriorate, lasts the life of the muffler.



(3) HEAVY BAKED-ENAMEL FINISH

Maremont protects outer shells with an "ionized" baked enamel finish. Mufflers stay factory-fresh in stock, resist road acids longer on the car.

MAREMONT MUFFLERS

The right design . . . for every engine !

MAREMONT AUTOMOTIVE PRODUCTS, INC. Chicago 8, Illinois



The Scotsman is available in three colors: Highland Gray, Lombard Green, and Admiral Blue.

The 300 SL Roadster

Gasoline fuel injection is featured in the Roadster's inclined six-cylinder engine. Acceleration is reported 0 to 60 miles per hour in six seconds. Also used is a single jointed, low pivot swing axle. This single-joint swing axle affords steady roadability, improved wheel grip and greater riding comfort, claim Daimler-Benz engineers. Also, a compensating spring has been added to the swing axle to obtain a comfortable ride at all speeds on all roads.

The engine develops 250 horsepower at 6200 RPM with a compression ratio of 9.5:1. The new Roadster is 51 inches high and 177.8 inches long.

Another new feature is an over-size turbo braking system.

The Roadster's instrument and accessories equipment has a light control arrangement which permits central operation of head lights, fog lights, parking and directional lights. Added safety is gained by padded dashboard edges countersunk on the driver's side.

All instrument dials and warning lights are in a combination gauge unit between speedometer and tachometer. Gasoline level, oil pressure and oil and water temperature are shown by columns of colored liquid. Warning lights are grouped in a central vertical panel. Control buttons and dials are edge-lighted at night.

Money may talk, but the amount most of us handle barely speaks above a whisper.

Classified Advertisements

SERVICE STATION, E. Central Fla. complete service department. Three pumps. Also retail sale of auto accessories. Xint corner location in city center. Est. '36. Includes RE & bldg. Work area 9800 sq. feet. 8 employed '56 sales, \$171,000. Write for brochure & photo. Ref. 8979.

CHAIN OF SHELL STATIONS, W. North Car. (11 owned, 4 leased.) Sales, one million dollars! Outlets in 2 Counties w/yr. round tourist patronage. Equipment complete 4 all! Expansive opportunity & unlimited potential! Write 4 details. Ref. 9019

AUTO PARTS, wholesale & retail. (a chain of 6 stores in Idaho & Oregon.) Gross, approximately \$800,000. Asking price of \$400,000 includes approx. Inventory \$300,000 and \$97,000 equipment! Established 28 years, Dept. 24077.

AUTOMOTIVE PARTS & SERVICE, Santa Ana, Calif. (Complete motor overhaul shop with diversified operation.) Wholesale & retail. Est. in 1918. Exceptional opportunity! Retiring. Profit: \$54,377. Write for complete details. Ref. 24206.

CHAS. FORD & ASSO., INC. 6425 Hollywood Blvd., Los Angeles, Calif.

OFFERING DISTRIBUTORS WORLD FAMOUS COMPETITIVELY PRICED IGNITION PARTS LINE MADE IN WESTERN GERMANY FOR AMERICAN CARS, TRUCKS, BOX 6, MOTOR AGE, 5601 CHESTNUT STREET, PHILADELPHIA 39, PA.

BUSINESS OPPORTUNITIES COLORADO GARAGE in nearby community grossing \$350,000 annually. Peak load in summer but busy all year. Olds and Chevrolet agencies now. Owner retiring after nearly 30 years with dealerships. Good climate and living conditions. Will sell real estate or business only. Exceptional opportunity. Substantial cash required. Lashley-Persons Investment Co., Box 72, Boulder, Colorado.

Get into BIG PROFIT "BEAR" ALIGNMENT BUSINESS

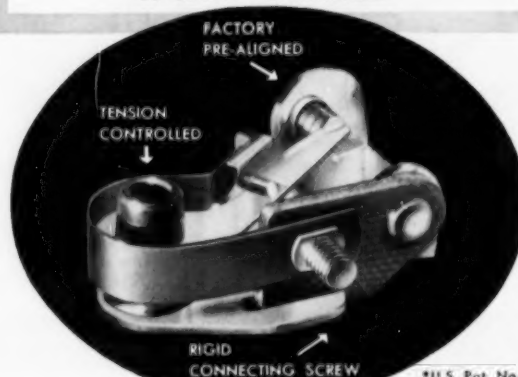
WITH LOW COST #128 SET



No matter how small your operation, here's your chance to get into big profit alignment under the nationally-advertised "BEAR" Sign! The new "Bear" #128 set is so simple, so accurate and so fast you can easily make hundreds of dollars net profit during the first year! And it takes up no more space than a small tool board! **DON'T DELAY ANY LONGER!** Ask your Jobber for details. **Bear Mfg. Co., Rock Island, Illinois.**

KEM 1-PIECE POINT SETS*

"A CINCH TO INSTALL"



*U.S. Pat. No. 2,777,909

for use on:

**BUICK, OLDSMOBILE, PONTIAC,
CADILLAC, CHEV-V8 and others.**



KEM MANUFACTURING CO., INC.

FAIR LAWN, NEW JERSEY, U. S. A.

Cable: Kemsales Fairlawnnewjersey

YOU CAN BECOME A "JET EXPERT"...



AND EARN MORE AS A ROCHESTER SPECIALIST!



*There's a
GM Training Center
near you!*

WRITE TODAY for full details on the free Rochester Training Program: Service Department, United Motors Service Division, General Motors Corporation, Detroit 2, Michigan.

**Over 15,000,000 cars
on the road are equipped with**



ROCHESTER PRODUCTS DIVISION OF
GENERAL MOTORS CORP., ROCHESTER, N. Y.



Anniversary Continued from page 49

In this year of the Golden Anniversary of Thornton-Fuller, president Pat Thornton can justly look with pride to the services his agency and personnel rendered to Philadelphia and neighboring communities over the years.

In 1929, three years before

Pat's father sold him the firm, Samuel Thornton bought out the interests of Lawrence Fuller although the sales terms called for the retaining of the famous name of "Thornton-Fuller."

Currently, the Thornton-Fuller operation covers approximately one half-million square

feet. Showrooms and service departments and used car locations are scattered strategically throughout Philadelphia and its suburbs.

General manager and vice president of the firm is Frederick (Fritz) Thornton, Pat's son and grandson to founder Samuel.

Home office headquarters of the firm is situated on "Automobile Row" on Philadelphia's North Broad St. Each of the Thornton-Fuller locations maintains a complete staff with a branch manager in charge. Once a week, a general sales meeting is held in Pat Thornton's office.

The history of the Thornton-Fuller institution would not be complete without some reference to the remarkable contributions made by the firm during World War II.

Under Pat Thornton's leadership, Thornton-Fuller facilities and personnel formed the nucleus of huge repair centers to produce gunsmith shops, tank repair shops—all mounted on truck bodies. For this work, Pat Thornton leased Philadelphia's historic Convention Hall and Commercial Museum. After doing a fine job for the Army on the trucks, Thornton accepted a contract from the Navy to assemble mobile message centers, field headquarters, and repair shops.

When hostilities ceased, he turned his great organizing talents and business sense once more to the automobile industry.

If there is any formula of success to be discovered, Pat Thornton likely would put it in these words: "Pride of product, hard work, long hours, and a reputation for unsurpassed service."

GET Profit ACTION
at this Point-of-SALE!

with these 3-FOR-ALL 6v. and 12v. VOLTAGE REGULATOR KITS

You'll get plenty of profit-action in faster sales with these 3-FOR-ALL Voltage Regulator Kits! With a minimum stock of these precision engineered 6v. and 12v. Regulators, you can service practically any car or light truck on the road. Millions of these famous Regulators, now in use as original equipment, create steady replacement demand for you. AND, they are competitively priced for today's service sales action.

These small, compact 3-FOR-ALL Display Kits make stocking easier and selling quicker as each Kit contains only three 6v. or three 12v. Regulators for the widest range of applications. Stock both—you can display both Kits *together* and get maximum profit action from this minimum inventory. Order from your supplier today. American Bosch, Springfield 7, Mass. A Division of American Bosch Arma Corporation.



A combination Counter Merchandiser can be assembled with this famous pair of 3-FOR-ALL Kits. It gives maximum display with minimum stock for 6v. and 12v. electrical system requirements.

AMERICAN BOSCH



The census taker was astounded to see the number 121 and 125 opposite the questions "Age of Mother, if living" and "Age of Father, if living." "Surely your parents aren't this old?" "Well, no. But they would be—if living."



NO MYSTERY — JUST BIG RETURNS —

with these *Snap-on* Automatic Transmission Tools

It's so easy, any mechanic can handle automatic transmission adjustments with these *Snap-on* sets. The tools make this work as simple as a brake adjustment job.

And the returns are big! All over the country, sets like these have paid for themselves in short order. You can adjust practically any automatic transmission; many jobs take only a half hour or less. And a properly adjusted automatic transmission means big savings and greater satisfaction for the car or truck owner.

These valuable income boosters can be yours on easy payments. Ask your *Snap-on* man for full details or write us.

Automatic Transmission Tool Set 2028-ATS

This set handles band and linkage adjustments on Hydramatic, Dynaflo, Powerglide, Fordomatic, Mercomatic, Flightomatic, Powerflite, and Turbodriven transmissions. It's quick and profitable because an estimated 70-75 percent of all adjustments can be done externally, without removing transmission. Photographs and easy-to-understand instructions in *Snap-on* instruction book make the job extra simple.

**AUTOMATIC TRANSMISSION SET AND
OIL PRESSURE SET COMBINATION**
\$13.60 down, \$2.73 per week



Oil Pressure Gauge Set AT-67-B

This set checks pressure of oil at critical points within transmission . . . reveals inside troubles which can't be corrected by band and linkage adjustments . . . eliminates needless work. Also, this gauge is necessary for setting linkage on certain transmissions.

On transmission overhaul, gauge localizes trouble area; spots oil leaks, pressure leaks, faulty servo pistons, clogged screens. Use it on Dynaflo, Flightomatic, Fordomatic, Hydramatic, Mercomatic, Powerflite, Powerglide, Studebaker, Turbodriven and Ultramatic transmissions.

*Snap-on is the trademark of Snap-on Tools Corporation.

**SNAP-ON TOOLS
CORPORATION**

8036-G 28th Avenue • Kenosha, Wisconsin



New Products Continued from page 70

227.

Locking Type Differential

Spicer Div., Dana Corporation: A locking type differential, known as the Thornton Powr-Lok is being offered for installation in cars, light trucks and station wagons. According to

the company, the Powr-Lok is not of full locking type and is designed as a torque divider. It is said to provide sufficient traction torque to the non-spinning wheel and a certain percentage of torque transfer to the wheel with poor traction. Powr-Lok design features, it is stated, two

TOPS FOR TIRES
JOB-DESIGNED
KEN-TOOLS
HAND-FORGED FROM
CHROME NICKEL ALLOY STEEL
FOR EXTRA STRENGTH AND EXTRA LONG LIFE

T-1X 18" Straight Spoon

T-2X 18" Curved Spoon

T-21R 18" Drop Center Tool—eliminates slipping and tube pinching

T-17 New LifeGuard Tube Remover

T-5B 17" All-Purpose Tire Tool—famous favorite for all-around work

T-66 Universal Hub Cap Remover for all cars—prevents marring—keeps cap from dropping—satisfaction guaranteed

T-10 Bead Spreader for casing inspection and repair

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.

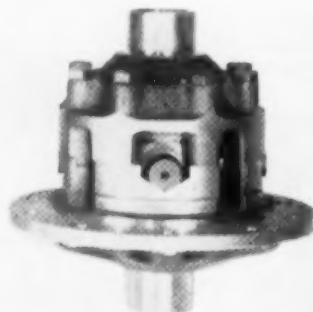


CHAMP-ITEMS
No. 444

**Gear Shift
Lever
Bushing
Assortment**

consists of 66 large and small insulator bushings; made of fibre to replace standard rubber bushings.

ORDER FROM YOUR JOBBER
Champ-Items, Inc. 6191 Maple Ave.
St. Louis 14, Mo.



individual cross pins with a slidable joint at the center, permitting each one to move independently, although continuously engaged. Ends of the pins are machined in the form of a Vee, the angle of Vee being determined for each application. A similar Vee is then machined in the case to provide a ramped cam surface.

228.

Band Adjustment Tools

Bonney Forge & Tool Works: For simple band adjustments, the manufacturer is offering a



tool board holding the tools to make the proper adjustments.

The tool board contains the following: a band adjusting tool No. 27010, designed, it is said, to make band adjustments on automatic transmissions; a band adjusting gage No. 27020 for front band adjustments of ford-o-matic and mere-o-matic transmissions; a front servo gage No. 27030 for hydramatic internal front band adjustment and a rear servo gage No. 27040 for making accurate adjustments.

229.

Brake Drum Lathe

Van Norman Automotive Equipment Company: A new
(Continued on page 120)

GASKET GUIDES

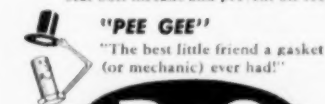
HOLD GASKETS SECURELY IN PLACE DURING INSTALLATION

- Perfectly aligned without grease, "goop" or strings.
- Bolts held firmly—ready for speed wrench tightening.
- Use on every gasket job—pans, plates and covers.
- Shop cost—less than 20¢ per job. SAVE 5 to 10 minutes.

You leave them in . . .

for a perfect seal

Guides are compressed as bolt is tightened to seal bolt threads and prevent oil seepage.



"PEE GEE"

"The best little friend a gasket (or mechanic) ever had!"



MANUFACTURING CO.
305 N.E. Russell Street • Portland 12, Oregon

SEND FOR A FREE TRIAL PACKAGE
26 GASKET GUIDES

P&G MANUFACTURING COMPANY
305 N.E. Russell St., Portland 12, Oregon

Company.....

Name.....

Address.....Zone.....

Specify bolt size (check one):
1/4" ☐ 5/16" ☐ 3/8" ☐ 7/16" ☐

Schrader®

is the word that sells
...when you show your customers these
better, safer tire accessories

880MB or 7960MB
Schrader Valve Caps,
with the doubly reinforced seal

4000MB
Schrader Valve Cores,
with the spring-at-the-bottom
for outstanding performance

5050A or 7750T
Schrader Tire Gauges,
for your customers to read
tire pressures instead of guessing

FIRST QUALITY TIRES

Don't keep it a secret that you give the finest service, and carry the finest products. Display your quality tires and the genuine Schrader Products that keep them going safely, longer. This is profitable business—the “extra” that brings the tire business to you instead of somebody else. Your Schrader supplier has these quality products—why not phone him right now.

Schrader®
a division of **SCOVILL**

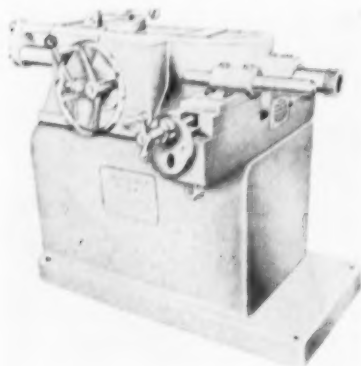
A. SCHRADER'S SON • BROOKLYN 38, N. Y.
Division of Scovill Manufacturing Company, Incorporated

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

New Products Continued from page 118

brake drum lathe, model No. 304 is said to be on the market and is for heavy duty use covering capacity from passenger cars to



trucks up to 10 tons. According to the company, the sliding and revolving 3 inch diameter spindle allows setup and access to the interior of the drum being reconditioned. The new brake drum lathe offers "Vapo-Jet" wet grinding. It is stated

that this attachment, dust free wet grinds the drum in one operation.

230. Pressure Cup

Binks Manufacturing Company: Development of a new pressure cup designed for use with the model 8 spray gun has been introduced. According to the manufacturer, the new cup features a knurled grip at the bottom of the cup which simplifies the fastening of the cup to the gun. The cup is said to be designed to eliminate slippage which often prevents perfect sealing.

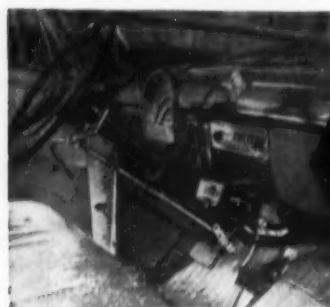
**231.
Coil and Condenser Tester**
Herbrand Equipment Sales: A new coil and condenser tester has been developed. According to the company, the hook-up is

practically foolproof as leads are marked and scale reads from bad to super for either coil or condenser check. It is said that the instrument can be used for



comparative checks of two or more coils or condensers and the definite performance comparisons established. Right hand switch control has setting to heat the coil for positive check. Also tests magneto coils and condensers.

(Continued on page 124)



DEALERS!
A 200% PROFIT FOR YOU

Patent No.
2,724,285

ARNOLD HAND DRIVE CONTROLS

There is an amazingly large demand for hand drive controls today! People who develop foot fatigue during long drives, persons with less than full power in their legs and those with weak arches, women drivers, paraplegics, polio victims, etc. are all prime prospects.

It takes but a little over an hour to install this ingenious device on any car and is guaranteed to last a lifetime! A single lever, attached to the steering post, controls both gas and brake . . . and a slight pressure is all that is needed. Arnold Hand Drive Controls are foolproof . . . are now in use by drivers in every State of the nation. They have been recommended and used by General Motors, Chrysler and Ford dealers everywhere!

Regular price for this highly polished, nickel plated unit to the driver is \$79.50. YOUR PRICE IS ONLY \$25.00 ppd. A PROFIT OF OVER 200%!

Write today for sample unit complete with installation instructions . . . and FREE advertising posters.

ARNOLD CORP. OF AMERICA

383 First Ave., New York 10, N. Y.

SUPERIOR'S AUTOMOTIVE SPECIAL!

AIR HAMMER

with Famous Metering Trigger

• 7 HAND-FORGED TOOLS • REGULATOR • TOOL BOX

Complete kit, a \$120.55 value Only **\$99.50**

Superior's famous model HDS-700 Air Hammer weighs only 3 1/4 lbs., measures just 8" overall, has a 3" piston stroke. Metering trigger delivers 0-2700 controllable blows per minute—does all the heavy jobs easily. Tools include special clean-cutting panel cutter that eliminates dressing or leading. Fast-cutting muffler and tail pipe tool also available.

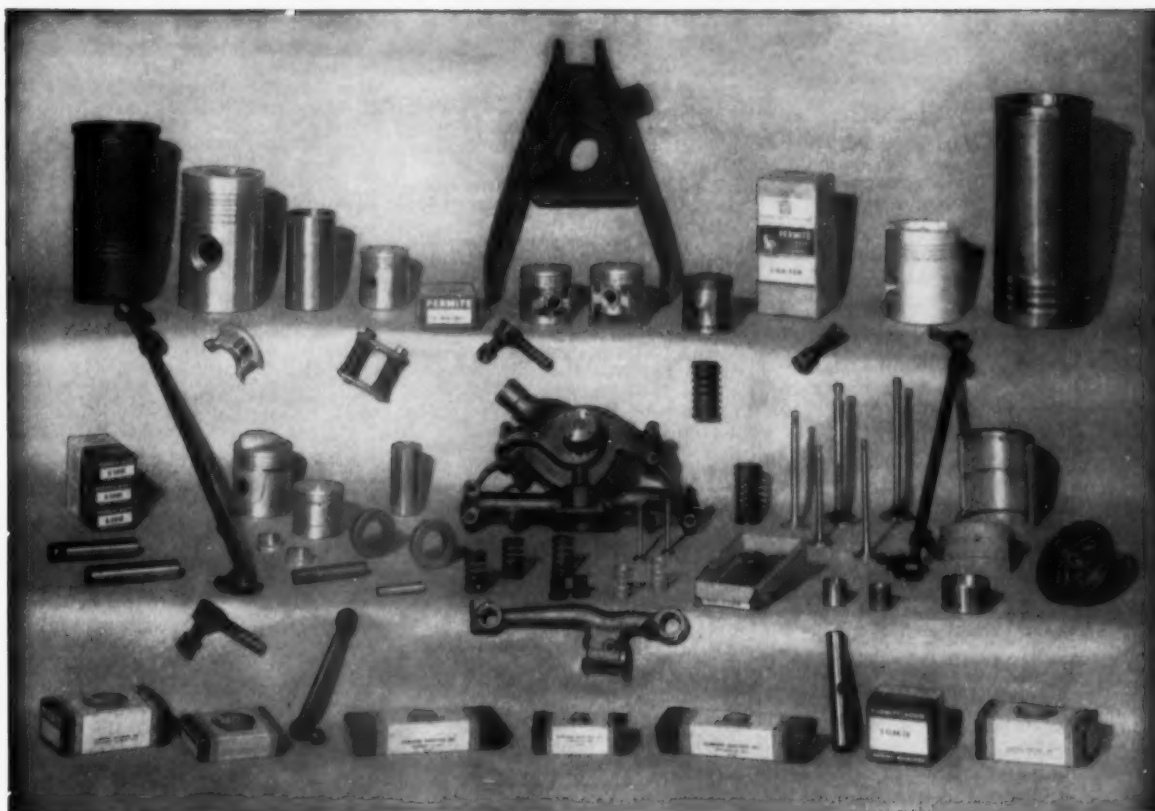
Kit Includes These 7 Tools

REG. LIST PRICES SHOWN

EXTENSION FLAT CHISEL \$3.95		
PUNCH \$3.50	FLAT CHISEL \$3.80	PANEL CUTTER \$5.25
SCRAPER WITH SPRING \$4.10	METAL CUTTER \$4.95	RIVET BUSTER \$3.80

FOR FULL DETAILS AND NAME OF NEAREST DISTRIBUTOR, WRITE: DEPT. MA-7

SUPERIOR PNEUMATIC & MANUFACTURING, INC.
4758 Warner Rd. Cleveland 25, Ohio



Valves
Valve Guides
Valve Parts
Pistons
Piston Pins
Pin Bushings
Cylinder Sleeves
Sleeve Assemblies
Engine Bearings
Water Pumps
Ball Joint Suspension
King Bolt Sets
Tie-Rod Ends
Suspension Parts
Spring Shackles

EVERY part is there in the PERMITE line

Yes, with Permte you have all needed parts in *one* line! The valves, the pistons, the pins, the bearings, the water pumps, the bolts, the suspension parts, the spring shackles . . . all the parts you need for engine or chassis overhaul are supplied in the complete Permte Line of Original Equipment Parts.

And Permte's greatly expanded production and service facilities in support of the Permte nation-wide distribution system make Permte Parts always AVAILABLE—when you want them—for all makes and models of cars, trucks, buses, tractors.

Just phone your nearby Permte Distributor.



ALUMINUM INDUSTRIES INC., Cincinnati 11, Ohio

original equipment

Permte parts
 the complete engine and chassis line

Calendar Of Coming Events

Dealers Conventions

Aug. 18-19 — Georgia Automobile Dealers Assn., General Oglethorpe Hotel, Savannah.
 Aug. 25-27 — Automobile Dealers Assn. of West Virginia, Greenbrier Hotel, White Sulphur Springs.
 Sept. 6-8 — Maine Automobile Dealers Assn., Inc., Samoset Hotel, Rockland, Me.
 Sept. 8-10 — New York State Automobile Dealers Inc., The Concord, Kiamesha Lake, N. Y.
 Sept. 8-10 — Automotive Trade Assn. of Virginia, Hotel Roanoke, Roanoke.
 Sept. 8-10 — Wyoming Automobile Dealers Assn., Sheridan, Wyoming.
 Sept. 9 — New Hampshire Automobile Dealers Assn., Lake Tarleton Club, Pike, N. H.
 Sept. 11 — Vermont Automobile Dealers Assn., Rutland Country Club, Rutland.
 Sept. 15-16 — Kentucky Automobile Dealers Assn., Sheraton Seelbach Hotel, Louisville.
 Sept. 15-17 — Colorado Automobile Dealers Assn., Colorado Hotel, Greenwood Springs, Colorado.
 Sept. 16-17 — Minnesota Automobile Dealers Assn., Nicollet Hotel, Minneapolis.
 Sept. 16-17 — Wisconsin Automotive Trades Assn., Milwaukee.
 Sept. 19-21 — Arkansas Automobile Dealers Assn., Marion Hotel, Little Rock.

Oct. 1-3 — New Jersey Automotive Trade Assn., Chalfonte-Haddon Hall, Atlantic City.
 Oct. 2-4 — Texas Automotive Dealers Assn., Baker Hotel, Dallas.
 Oct. 20-21 — Oklahoma Auto Dealers Assn., Tulsa.
 Oct. 20-22 — Florida Automobile Dealers Assn., Balmoral Hotel (Bal Harbour), Miami Beach.
 Nov. 3-5 — Mississippi Automobile Dealers Assn., Buena Vista Hotel, Biloxi.
 Nov. 7 — Connecticut Automotive Trade Assn., Hotel Statler, Hartford.
 Nov. 10-12 — Ohio Automobile Dealers Assn., The Neil House, Columbus.
 Nov. 24-26 — National Independent Automobile Dealers Assn., Washington, D. C.
 Dec. 3 — Utah Automobile Dealers Assn., Hotel Utah, Salt Lake City.
 Jan. 11-15, 1958 — National Automobile Dealers Assn., Miami Beach.

Automobile Shows

Nov. 22-Dec. 1 — St. Louis Auto Show, The Arena, St. Louis.
 Dec. 14-21 — Miami Automobile Show, Dinner Key Auditorium, Miami.
 Jan. 3-11, 1958 — Upper Midwest Auto Show, Municipal Auditorium, Minneapolis.
 Jan. 4-12 — Chicago Auto Show, International Amphitheatre, Chicago.
 Jan. 4-12 — National Automobile Show, New York Coliseum.

Jan. 8-12 — St. Paul Automobile Show, Auditorium, St. Paul.
 Jan. 18-25 — Pittsburgh Automobile Show, Hunt National Guard Armory, Pittsburgh, Pa.
 Jan. 18-26 — Cincinnati Auto Show, North and South Wings, Music Hall, Cincinnati.
 Jan. 18-26 — Detroit Auto Show, Artillery Armory, Detroit.
 Jan. 23-28 — Tampa Auto Show, Fort Hesterly Armory, Tampa.
 Jan. 25-Feb. 2 — Houston Automobile Show, Houston.
 Feb. 1-8 — Louisville Automobile Show, State Fair Center, Louisville.

General

Sept. 12-14 — Automotive Parts Rebuilders Assn., Convention and Trade Show, Congress Hotel, Chicago.
 Sept. 23-26 — Automotive Advertisers Council fall meeting, St. Clair Inn, Detroit.
 Oct. 17-19 — Automotive Wholesalers of Texas Convention and Booth Conference, Hilton Hotel, San Antonio.
 Nov. 2-4 — Automotive Wholesalers Association of Louisiana convention and booth conference, Jung Hotel, New Orleans.

**An Irishman translates
mal de mer "you can't take
it with you."**

The *PIONEER* Tool FOR INSTALLING VALVE SEAT RINGS

The Biggest
Seller



THE FIRST . . . and still the MOST POPULAR, MOST PRACTICAL, SIMPLEST, MOST UNIVERSAL tool of its kind made.
 EVERLASTING . . . the first tools made over 25 years ago are still in service.

K. O. LEE COMPANY
 ABERDEEN, SOUTH DAKOTA

**38th INTERNATIONAL
 AUTOMOBILE
 EXHIBITION
 GERMANY**
FRANKFURT / MAIN
 19th-29th SEPTEMBER 1957
 VERBAND DER AUTOMOBILINDUSTRIE E.V. FRANKFURT/M.

NEW PROFIT POTENTIAL IN 4-BARREL SERVICING

WITH HOLLEY'S SPECIALLY PRICED H-211 REPAIR KIT PROGRAM

Each H-211 assortment contains a repair kit—two each of three different part numbers—for complete coverage at low cost. Included are fully illustrated instruction sheets packaged with each repair kit as well as a colorful wall banner.

Introducing: Holley's H-211 4-barrel service kit program—the proper parts, *incentive priced*, and backed by a field-proven promotion campaign which will build your 4-barrel service profits. And—*most important*, a 4-barrel service school, condensed into a single evening session, yet thorough enough to fully familiarize you with 4-barrel repair.

To find out more about your growing profit potential in the growing 4-barrel service market, ask your authorized Holley distributor.

H-211 ASSORTMENT INCLUDES 2 OF EACH PART NO.	
PART NO.	APPLICATION
85R-355	1954 Mercury (std. and auto. trans.)
	1954 Ford Police Car
85R-412	1955 Ford Pass. (std. and auto. trans.)
	1955 Thunderbird (std. and auto. trans.)
	1955 Mercury (std. and auto. trans.)
	1955 Ford Police Car
85R-429	1956 Ford (std. and auto. trans.)
	1956 Thunderbird (std. and auto. trans.)
	1956 Ford Police Car
	1956 Mercury (std. and auto. trans.)



HOLLEY
Carburetor Co.

11955 E. Nine Mile Road
Van Dyke, Michigan

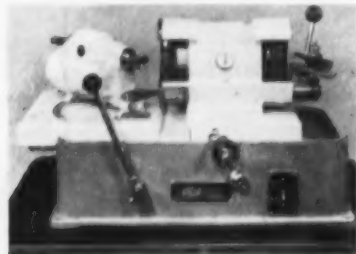
FOR MORE THAN HALF-A-CENTURY
ORIGINAL EQUIPMENT
MANUFACTURERS FOR THE
AUTOMOTIVE INDUSTRY

RT-24

232.

Valve Refacer

Thor Power Tool Company: A valve refacer is being introduced by its manufacturer. It is said that improvements include a

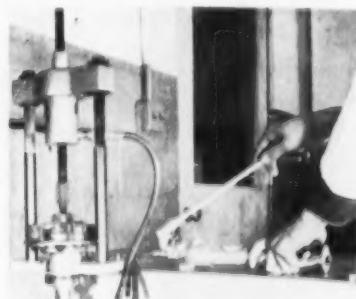


precision collet in the valve head for grinding of the valve face in concentricity with the valve stem. It is stated that the new collet head permits 50 percent faster chucking and is driven through two gears by a Thor universal electric motor. The grinding unit has a larger grinding wheel with equipment for wheel dressing. The unit also contains a butt grinding wheel with attachments to square up valve stems, rocker arms and tappets.

233.

Portable Power Tools

Kent-Moore Organization, Inc.: Power tools having a 12 ton capacity have been intro-



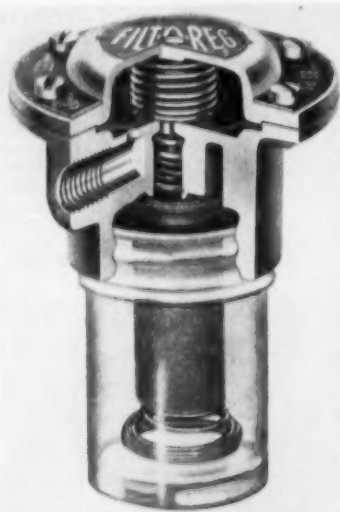
duced. According to the manufacturer, the Ram may be used with any available hydraulic pump by using a compatible coupler section. The Kent-Moore Pump is said to come complete

with both sections of a quick coupler for complete assembly. The company states that these tools are light weight, easy to handle, and occupy only a small space on the work bench. By reversing direction, the ram can be used to push or pull.

234.

Fuel Pressure Regulators

Alondra Sales, Inc.: According to the manufacturer, Filt-O-Reg fuel pressure regulators are now being made in 3 psi model for trucks and high horsepower car engines; 2 psi model for the



majority of engines and special 3/4 psi model for industrial engines with gravity fuel feed. According to the company, each model is made in two styles, with or without the filter. The company claims that Filt-O-Reg will eliminate most carburetor troubles caused by fuel system over-pressure. It is said that the precision engineered fuel pressure regulator fits in the fuel line near the carburetor.

235.

Distributor Tester

King Electric Equipment Company: A distributor tester

has been developed which, it is said, utilizes a stroboscopic firing pattern plotted within 360 degree etched protractor ring. It is stated that the driving shaft is coupled to reversible 1/3 hp motor through a mechanical

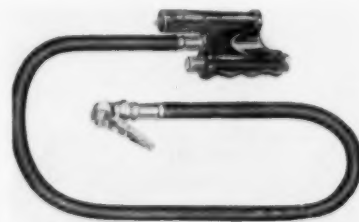


speed control to provide constant torque over the speed range. Automatic unloading device, the company states, allows free spindle when machine is not in operation. The tester is said to be made of cast aluminum with reinforcing steel frame.

236.

Chuck Gage

A. Schrader's Son Div. of Scovill Mfrs. Co., Inc. A new chuck gage has been introduced. It is said to comply with the tubeless tire mounting recommendations of care and safety when inflating a replacement or newly mounted tire. The 3 ft of hose and chuck clip permits standing back as beads are seated in



mounting tires. The tire inflating chuck gage has a replaceable gage unit; a single push button control of inflating, gaging and deflating and a plastic body.



For neater, faster paint jobs...

NEW FORMULA Scotch Brand Masking Tape

with the MAGIC TOUCH

Goes on easy! Conforms to curves and contours... in any weather... with dependable performance every time. *Sticks tight!* Instant-grab adhesive holds tightly to give clean, sharp separation without paint "bleed" or creep-under. *Strips off clean!* Leaves no jagged edge... no messy adhesive residue. *New Formula "SCOTCH" Brand Masking Tape* is the surest, fastest way to turn out top-notch two-tone and over-all paint jobs!



NEW tear-strip carton opens quickly, easily. Eliminates cutting and prying... prevents damage to contents, leaves a hinged protective flap. New size fits conveniently on shelves or in bins.



NEW individual "Rak-A-Tape" units packed four per carton. Each "Rak-A-Tape" unit holds one dozen rolls of tape. Easy to remove, easy to store, easy to order from your jobber.



HANDY "Rak-A-Tape" hangs right on wall in shop or storage room. New formula "SCOTCH" Brand Masking Tape is finger-tip handy when needed. Visual inventory of tape at all times.

NEW FORMULA
REG. U. S. PAT. OFF.
SCOTCH
BRAND
MASKING TAPE... a 3M Automotive Product

*Look for the red plaid
on the core!*

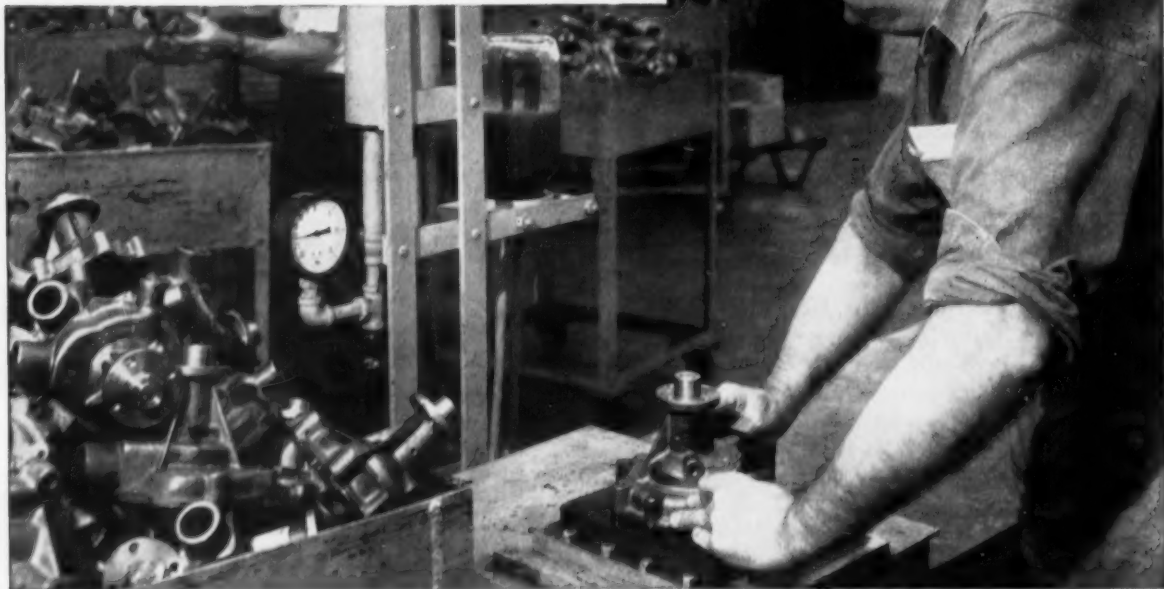


The term "Scotch" and "3M" and the plaid design are registered trademarks of Minnesota Mining and Manufacturing Co., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N. Y. In Canada: P.O. Box 757, London, Ontario.



Water Pump "Torture Test"—these machines test Toledo Steel water pumps under conditions more rigorous than the toughest actual engine usage. Pulleys, seals, and other internal parts are thoroughly checked for endurance and operating efficiency.

100% Test Against Leakage—every Toledo Steel water pump is subjected to this vacuum test which detects even the most minute leaks.



Every **TOLEDO STEEL WATER PUMP** *is* *vacuum-tested for perfect performance*

CUSTOMER satisfaction is guaranteed when you install factory duplicate Toledo Steel water pumps. Only the highest quality materials are used to assure long, trouble-free service. And *every* Toledo Steel water pump is tested to protect against leakage of water

or costly anti-freeze solutions.

See your Toledo Steel Distributor for complete water pump coverage for all passenger car makes and models. He has water pumps for trucks and farm tractors, too. Ask him for complete details, including profit possibilities.

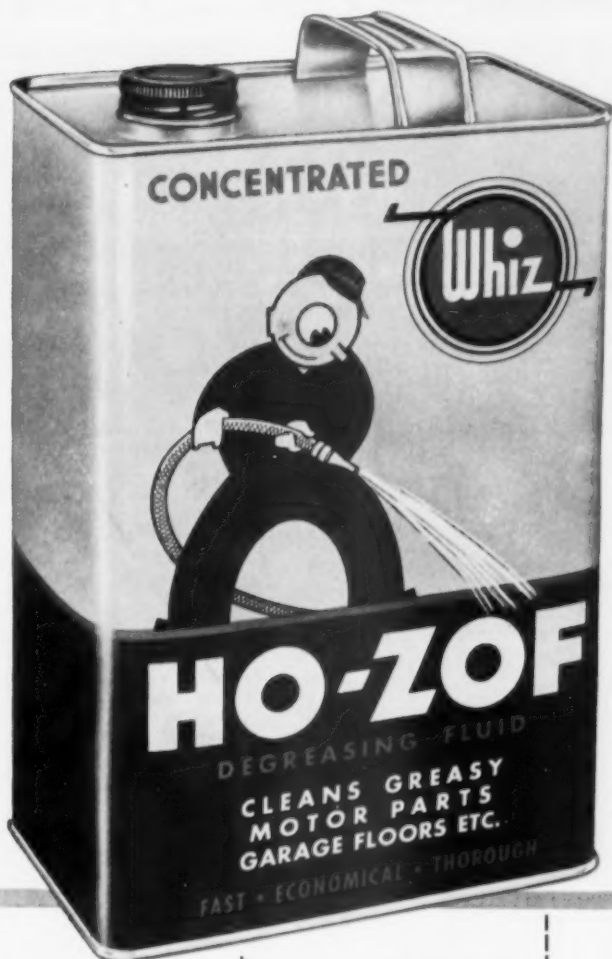


TOLEDO STEEL PRODUCTS

Division of Thompson Products, Inc.

6402 CEDAR AVE. • CLEVELAND 3, OHIO

Quality Hollingshead products increase shop profits, customer satisfaction, and safety



Take HO-ZOF, for instance. This top-notch degreasing agent comes concentrated in economical cans or drums. Mix it with kerosene, then brush or spray it on any greasy surface—concrete areaway or dirty engine—and rinse off all grease, dirt and grime with water. This safe-to-use degreaser keeps shop floors sparklingly clean and inviting—lets you specialize in engine cleaning the economical way, with no costly new equipment to buy!

Or Hollingshead *Approved* brake fluid! It exceeds all S.A.E. specifications for safety. You needn't worry about your customers' brakes failing when they are needed most!

We can point out similar advantages in all the items in our complete line of top-quality automotive products. Order from your Hollingshead distributor today!

R. M. HOLLINGSHEAD CORP.

Camden, N.J.

HO-ZOF (concentrated) comes in 1 and 5-gal. cans, 15 and 55-gal. drums. Also available ready-to-use in quarts.



HUSH-SHAK rubber shackle lubricant stops rubber shackle squeaks—preserves rubber—keeps it soft and pliable. Vegetable oil base. 1 and 5-gal. cans.



LOOSEN-ALL super penetrating oil frees frozen parts—speeds disassembly of corroded components. 4-oz., 8-oz., pt., qt. and gal. cans.



Approved No. 4 heavy duty brake fluid. Safe to +330°F—even in '57 models. Exceeds S.A.E. Specification 70R1. 12-oz., pt., 1 and 5-gal. cans.



Approved No. 3 brake fluid. Meets S.A.E. Specification 70R2 for moderate duty. Mixes with other fluids. 12-oz., pt., qt., 1 and 5-gal. cans.

Index to Advertisers

This Advertisers' Index is published as a convenience, and not as part of the advertising contract. Every care will be taken to index correctly. No allowance will be made for errors or failure to insert.



A	
AP Parts Corp.	84-85
Albertson & Co.	20
Aluminum Industries, Inc.	121
American Bosch Div. American Bosch Arms Corp.	116
American Brake Shoe Co. Kellogg Div.	92
American Hammered Automotive Replacement Div.	77
Armstrong Rubber Co.	8
Arnold Corp. of Amer.	120
Aro Equipment Corp.	26-27

B	
Bear Mfg. Co.	114
Bendix Aviation Corp. Eclipse Machine Div.	76
Bishman Mfg. Co.	96
Black & Decker Mfg. Co.	79
Blackhawk Mfg. Co.	13

C	
Carter Carburetor Div. A C F Industries	108-109
Champ-Items, Inc.	118
Champion Spark Plug Co.	94-95
Chrysler Motors Corp. (Mopar Div.)	11
Classified Ads	114
Clevite Service Div.	16
Commercial Credit Corp.	5
Commercial Solvents Corp.	81

D	
De Vilbiss Co.	97
Du Mont Laboratories, Allen B.	9
Du Pont de Nemours Co. Zerex & Zerone	12

E	
Electric Auto Lite Co.	22-23, 103
Ertel Products Co.	106

F	
Federal - Mogul - Bower Bearings Co., Inc., Federal-Mogul Service Div.	6
Felt Products Mfg. Co.	129
Ford Motor Co. Parts & Service Div.	14-15
Fram Corp.	83

G	
Gabriel Co.	93
Grey Rock Div. Raybestos-Manhattan, Inc.	21

N	
National Seal Div. Federal-Mogul-Bower Bearings, Inc.	18-19
New Britain Machine Co. (Hand Tools)	75

O	
Olin Mathieson Chemical Corp.	98

P	
P & D Mfg. Co.	86
P & G Mfg. Co.	118
Perfect Circle Corp.	73
Permatex Co., Inc.	1
Pittsburgh Plate Glass Co.	17
Porter, Inc., H. K.	78
Proto Tools Div.	7

R	
Ramsey Corp.	3rd Cover
Raybestos Div. Raybestos-Manhattan, Inc.	30
Ren Plastics, Inc.	99
Republic Gear Co.	107
Rochester Products Div.	115

S	
Schrader's Son, A.	119
Sealed Power Corp.	2nd Cover
Snap-on Tools Corp.	117
Standard Motor Products, Inc.	2
Stant Mfg. Co.	80
Superior Pneumatic & Mfg. Inc.	120

T	
Thermoid Co.	Back Cover
Thompson Prod., Inc. (Service Sales Div.)	101
Timken Roller Bearing Co.	29
Toledo Steel Products Div.	126

U	
Union Oil Co.	111

V	
Verband der Automobilindustrie	122

W	
Wagner Electric Corp.	24-25
Weaver Mfg. Co.	104-105
Wilkening Mfg. Co.	32
Wix Corp.	10

Y	
Yankee Metal Products Corp.	28

H	
Harley-Davidson Motor Co.	82
Holley Carburetor Co.	123
Hollingshead Corp., R. M.	127
Homestead Valve Mfg. Co.	63
Hygrade Products Div.	2

I	
Inland Mfg. Co.	91

J	
Johnson Products, Inc.	110

K	
Kellogg Div. American Brake Shoe Co.	92
Kem Mfg. Co., Inc.	114
Ken Tool Mfg. Co.	118

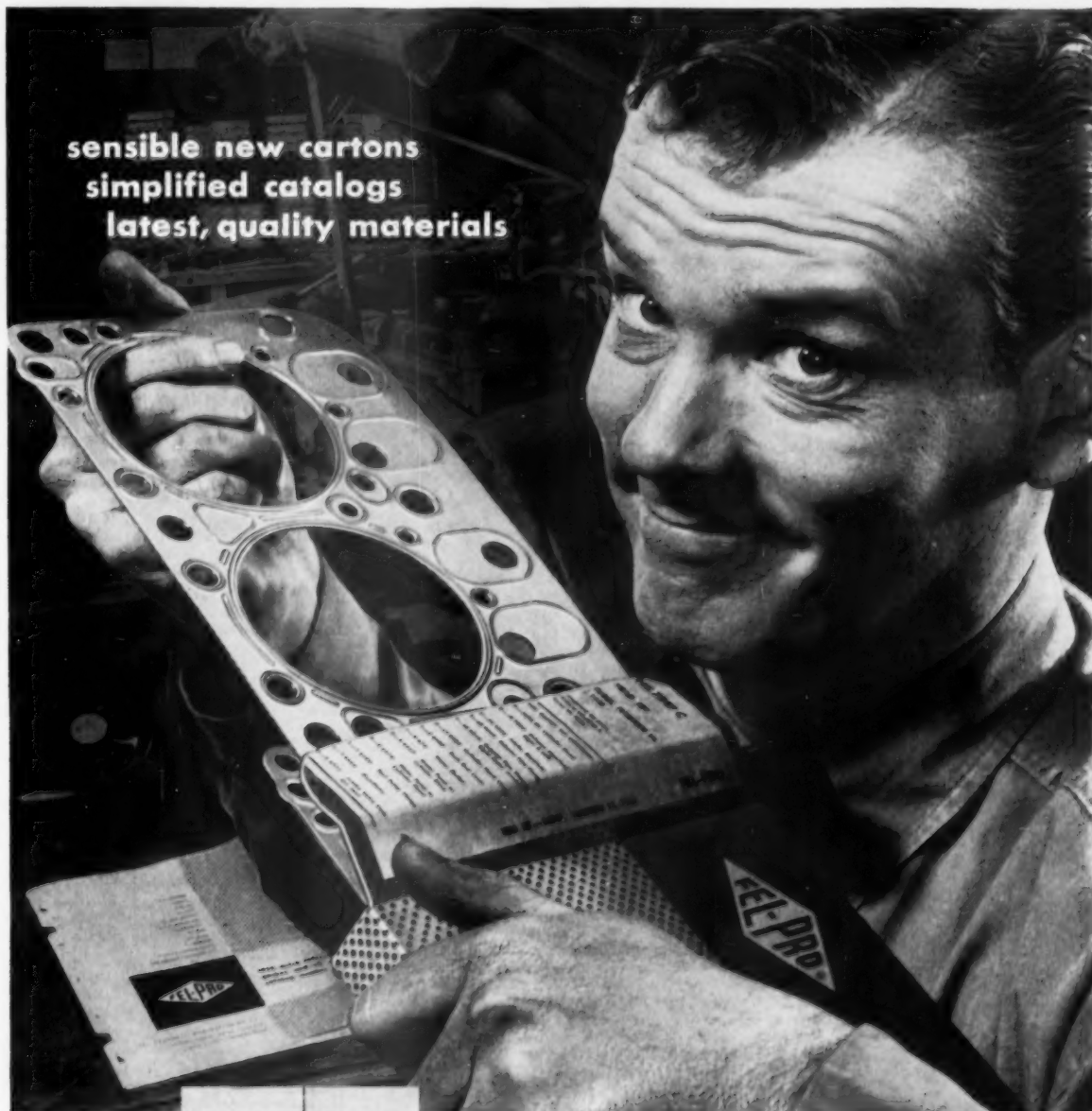
L	
Lee Co., K. O.	122
Link Belt Co.	102

M	
McQuay-Norris Mfg. Co.	87 thru 90
Maremont Automotive Products, Inc.	112-113
Minnesota Automotive, Inc.	100
Minnesota Mining & Mfg. Co.	125
Moog Industries, Inc.	4

FEL-PRO GASKETS

UP-TO-DATE where it counts!

sensible new cartons
simplified catalogs
latest, quality materials



at your
Jobber's,
look for this
**DIAMOND
of QUALITY**

To keep your service up-to-date, you must have replacement parts that are up-to-date—and that goes for gaskets. Because gaskets tend to be taken for granted with a "they're all alike" attitude, we strive to make the Fel-Pro Gasket line *different...better...up-to-date* where it counts. New cartons, labeled for quick identification, squared off to stack neatly. Simplified catalogs, mechanic-designed to cut looking-up time. And, gaskets that fit better, seal better, because they use the latest mechanical and chemical developments. Why not start now to keep your gasketing up-to-date? See your Fel-Pro Jobber.

Felt Products Mfg. Co., 1521 Carroll Avenue, Chicago, Illinois.

The Last Laugh



Newly appointed minister: Do you think they approved of my sermon?
His wife: Yes, they were all nodding.

"Who was that lovely little babe I saw you with last night?"
"I'll tell you if you promise not to tell my wife?"
"Okay—I promise."
"Well, it was my wife."

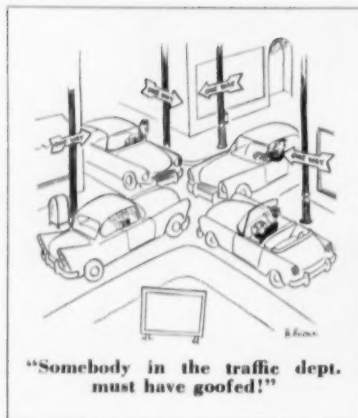
"What's the difference between a little girl and a big girl?"
"A little girl wants an all-day sucker, and a big girl wants one just for the evening."

His secretary was just comfortably ensconced on his lap when the jobber looked up and saw his wife entering the office.

"Mile-High Furniture Company," he dictated rapidly, "Gentlemen: Shortages or no shortages, how long do you think I can run my office with only one chair?"



"Bill thought he had her when he snapped on the safety belt, but she wriggled out."



"The best thing for you to do is give up drinking and smoking, go to bed early, and get up early."
"I don't deserve the best, Doc. What's the second best?"

For a time it became necessary to house both men and women students in the same dormitory at a small college, but the men were strictly forbidden to visit the women's section. One day, however, a student was caught on forbidden territory. The dean said sternly, "Well, Mr. Smith, this first offense will cost you 50¢, the next 75¢, and so on until the fine reaches \$5."

Then the student, by no means a shy one, asked, "Pardon me, sir, but what does a season ticket cost?"

Mechanic: With a car like that, my advice is to keep it moving.

Owner: Why?

Mechanic: If you ever stop, the cops will think it's an accident.

It's no sin to go motoring on Sunday, but the way some people drive is a crime.

Lawyer: Then your brother, I take it, is elderly?

Client: Elderly! He gets winded playing checkers.

For over a year, a man had eaten in a small restaurant whose sign read: "Sally's Home Cooking." But never once had he seen Sally.

Finally his curiosity got the better of him and he said to the waitress: "I've been having lunch in here for a long time, and Sally is never around; where is she?"

"She's just where the sign says she is," the waitress answered, "home cooking."

"The President of the United States," wrote a young student, "is chosen by the electrical college, composed of state delegates with one volt each. That is why a portion of the people is usually shocked by the result."



Whatever is Finest for the Engine you get in every RAMCO Engineered 10-Up Set



Ramco chrome C-9 oil ring (left above) Years-ahead Circumferential Expansion achieved through a new Duomatic Expander design provides a new high in conformability and side sealing action.

Ramco chrome Spiro-Seal oil ring (right above) has had the Circumferential Expansion action of the Spiro-Segment for over 18 years. With its exclusive Double-Life Principle, Spiro-Seal is the most advanced design oil ring available for most of today's re-ring requirements.

Ramco years-ahead compression rings . . . Into each Ramco 10-Up engineered set goes just the right combination of compression rings, each embodying advanced Ramco engineering such as the RAMCO TOP CHROME COMPRESSION, with its equal pressure action; the RAMCO CHROME RAIL COMPRESSION, which double seals with chrome and cast-iron; and the RAMCO TAPERED FACE COMPRESSION, with its hairline bearing surface for immediate seating.

Not just one exclusive, years-ahead oil ring . . . but two! That is Ramco Engineering's answer for you who want the finest re-powering results. Chrome C-9 or Chrome Spiro-Seal, whichever is finest for the engine, is the oil ring you get when you call for Ramco engineered 10-Up sets. In each set, too, are advanced Ramco exclusive designed Compression rings, providing a selected combination of top chrome, chrome rail or cast-iron types to provide the finest ring performance required by the specific engine. That is why when you depend on Ramco Engineered 10-Up Sets, you are assured of everything required for Finest Get Up and GO! Ramco Corporation, St. Louis 8, Missouri.

- FINEST** Immediate Seat-In without engine drag
- FINEST** Immediate Oil Control without wall wearing pressure
- FINEST** Complete High Vacuum Oil Control by top and bottom oil ring sealing
- FINEST** Continuing Compensation for Wear that keeps engines running like new longer
- FINEST** Longer Service Life because of Ramco's years-ahead precision engineering



RAMCO 10^{up} piston ring sets

for **FINEST** Get UP and GO!



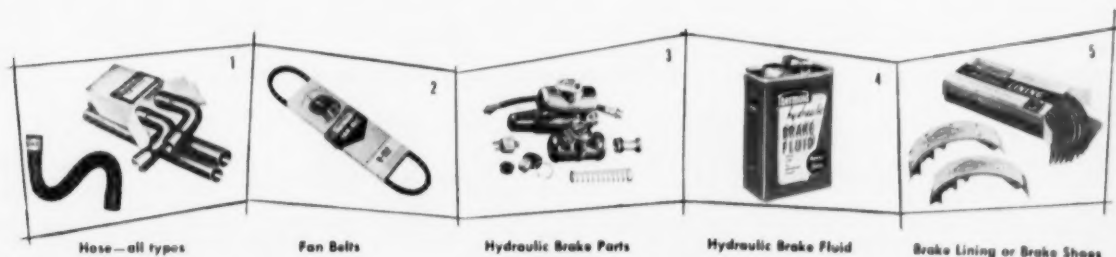
**...when you make
VACATION
CHECK-UPS**

Now that summer is here you'll be busy getting your customers' cars ready for vacation trips. It is profitable work for you and a real service to your customers—particularly when you include cooling and brake systems in your check-up. Radiator hose . . . fan belts . . . brake lining . . . brake fluid . . . and brake parts are items that offer you extra profits, because they are frequently overlooked until it's time for the vacation check!

Be sure to use Thermoid when you replace any of these vital parts. You can count on Thermoid products to give the outstanding service that means complete customer satisfaction. Call your Thermoid jobber.



Thermoid Company • Trenton, N.J.



Hose—all types

Fan Belts

Hydraulic Brake Parts

Hydraulic Brake Fluid

Brake Lining or Brake Shoes